



GALATA YÖS-SAT YAYINLARI

YÖS

Yeni Tarz Sorular

New Style Questions

IQ

Intelligence Quotient

Soru Bankası / Question bank

Bu kitabın tüm hakları Sankaya Eğitim Danışmanlık Hizmetleri Ltd. Şti'ne aittir. Bu kitabın tamamını veya bir kısmının elektronik, mekanik, fotokopi ya da herhangi bir kayıt sistemiyle çoğaltılması ve yayımlanması yasaktır.

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ÖNSÖZ

Değerli Öğretmenler ve Sevgili Öğrenciler,

Galata Eğitim Kurumları, 2005'ten bugüne YÖS, SAT ve TÖMER sınavlarına hazırlanan öğrencilere eğitim ve öğretim faaliyetlerinin yanı sıra rehberlik hizmetleri de veren bir eğitim kurumudur.

Kurumumuz, ülkemizde YÖS'e girecek olan öğrencilere ve dünyanın farklı yerlerinden ülkemize gelen uluslararası öğrencilere YÖS'e hazırlanma aşamasında şu hizmetleri vermektedir:

- Ders çalışma teknikleri,
- Üniversite ve bölüm bilgileri,
- Başvuru ve tercih aşamasında rehberlik hizmetleri.

Öğrencilerimizin bu aşamalardan doğru yönlendirmelerle geçerek adım adım başarıya ulaşması sağlanmaktadır.

Elinizde bulunan IQ Soru Bankası Kitabı, üniversitelerin son yıllarda YÖS'te sormuş oldukları yeni tarz sorulara göre hazırlanmıştır. İçerisinde problem, sayısal mantık, sözel mantık ve renkli içerikli sorularla, bütün konuları kapsayacak şekilde her tarz sorudan hazırlanan kitabımız, sizleri başarıya ulaştıracak ve sınavlarda karşınıza çıkacak sorularda sizlere pratiklik kazandıracaktır. Değerli öğretmenlerimize ve sevgili öğrencilerimize faydalı olması dileğiyle.

FOREWORD

Dear Teachers and Students,

Galata Educational Institutions is an educational institution that has been providing education and training activities as well as guidance services to students preparing for YÖS, SAT, and TÖMER exams since 2005.

Our institution provides the following services to students who will enter YÖS in our country and international students who come to our country from different parts of the world in the stage of preparing for YÖS:

- *Study techniques,*
- *University and department information,*
- *Providing guidance services at the application and selection stage.*

It is ensured that our students reach success step by step by passing these stages with the right guidance.

The IQ Question Bank Book you have has been prepared according to the new style questions that universities have recently asked in YÖS. Our book, which is prepared from all kinds of questions, including problems, numerical logic, verbal logic, and colorful questions, will make you successful and give you practicality in the questions you will encounter in the exams. We hope it will be useful to our valuable teachers and dear students.

İÇİNDEKİLER (CONTENTS)

● ŞİFRELER <i>PASSWORD</i>	5	● ŞEKİL TABLOLARI <i>FIGURE TABLES</i>	323
● SAYI DİZİLERİ <i>SEQUENCES</i>	29	● ŞEKİL SIRALAMA <i>FIGURE ORDERING</i>	353
● İŞLEMLER <i>OPERATIONS</i>	67	● FARKLI OLAN ŞEKİL BULMA <i>FINDING DIFFERENT FIGURE</i>	373
● SAYI BAĞINTILARI <i>NUMBER RELATIONS</i>	107	● ŞEKİL KARŞILAŞTIRMA <i>FIGURE COMPARISON</i>	383
● TABLOLAR <i>TABLES</i>	153	● 3 BOYUTLU CİSİMLER <i>3 DIMENSIONAL OBJECT</i>	399
● TERAZİLER <i>SCALES</i>	185	● KAĞIT KESME - KATLAMA <i>PAPER CUTTING - FOLDING</i>	409
● EŞLEŞTİRME <i>MATCHING</i>	209	● ÜÇGEN SAYMA <i>TRIANGLE COUNTING</i>	417
● DENKLEM EŞLEŞTİRME <i>SIMILARITY IN TRIANGLES</i>	221	● SAAT <i>CLOCK</i>	427
● KÜPLER <i>CUBES</i>	251	● SUDOKU <i>SUDOKU</i>	433
● GRAFİKLER <i>GRAPHS</i>	261	● PROBLEMLER <i>PROBLEMS</i>	443
● ÇEVRE VE ALAN BULMA <i>FINDING PERIMETER AND AREA</i>	277	● MANTIK PROBLEMLERİ <i>LOGIC PROBLEMS</i>	455
● KLM <i>KLM</i>	287	● DENEMELER <i>TRIALS</i>	469
● ŞEKİL TAMAMLAMA <i>FIGURE COMPLETING</i>	311		

- 1.
- | | | |
|------|---|------|
| I. | } | II. |
| RMTK | ↔ | 5734 |
| YLRP | | 2106 |
| RTYF | | 1463 |
| PMKL | | 5170 |
| MFLY | | 3652 |
- ⇒ RTYF =?
- A) 5734 B) 2106 C) 1463
D) 5170 E) 3652

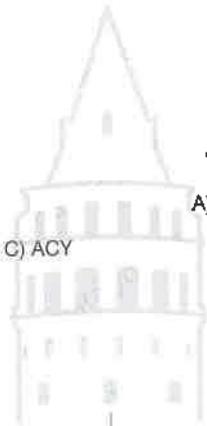
- 4.
- | | | |
|-----|---|-----|
| I. | ↔ | II. |
| 825 | ↔ | RSE |
| 473 | | URR |
| 144 | | ELC |
| 369 | | KFA |
- ⇒ 93714 =?
- A) FARUK B) CAFER C) RESUL
D) CESUR E) RASEF

- 2.
- | | | |
|-----|---|-----|
| I. | } | II. |
| □⊕○ | ↔ | EXA |
| ⊗△○ | | YBA |
| ⊕⊗□ | | ACY |
| ○▽□ | | BEY |
| ▽⊕○ | | DFY |
- ⇒ ⊗△○ =?
- A) EXA B) YBA C) ACY
D) BEY E) DFY

- 5.
- | | | |
|------|---|------|
| I. | ↔ | II. |
| MTOR | ↔ | AKCD |
| POOL | | NDER |
| SEAT | | MKKY |
| FEEL | | IEEY |
- ⇒ TROSF =?
- A) DIARY B) DAIRY C) DRINK
D) DREAM E) DANCE

- 3.
- | | | |
|-------|---|-------|
| I. | } | II. |
| 45127 | ↔ | 24375 |
| 72614 | | 35126 |
| 53762 | | 67452 |
| 21436 | | 43761 |
| 64513 | | 16274 |
- ⇒ 53762 =?
- A) 24375 B) 35126 C) 67452
D) 43761 E) 16274

- 6.
- | | | |
|------|---|------|
| I. | ↔ | II. |
| ★△□ | ↔ | 4682 |
| ⊗▲+* | | 1579 |
| ■+▲⊗ | | 3975 |
| ○□△* | | 2869 |
- ⇒ ★○ + ▲□ =?
- A) 31647 B) 41795 C) 31684
D) 32675 E) 31685



7.

I.		II.
BRKEL	⇔	91245
CAELM		86137
ULRBE		94765
CRKAM		31276

⇒ $A^B + (CU) = ?$

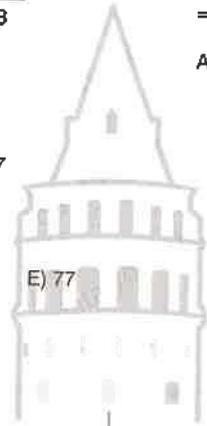
- A) 154 B) 162 C) 176
D) 182 E) 198

8.

I.		II.
$X \ominus \nabla$	⇔	962 468
$\Leftarrow \ominus \square$		284
$\blacktriangle = \blacksquare$		431 197
$\square \nabla X$		
$X \circ \blacktriangle$		

⇒ $\ominus^2 + \nabla^2 - \blacksquare^2 = ?$

- A) 18 B) 24 C) 51 D) 61 E) 77



10.

I.		II.
YAPBOZ	=	428095
KARTON	=	627391

→ ARPA + KOZA = ?

- A) YAKA B) ORTY C) KAYA
D) ONAY E) PRNY

11. PIZZA KULESİ = 29553 784169

⇒ AK x PL = ?

- A) SSS B) iii C) UUU
D) ZZZ E) KKK

9.

I.		II.
CEH	⇔	357 856
YAB		534
ZEN		258 249
ECA		
YEZ		

⇒ $\sqrt{E + Y} \sqrt{A} = ?$

- A) 3 B) 5 C) 7 D) 4 E) 6

12.

←	↓	→	↑	} = ?
↑	→	↓	←	
→	↑	←	↑	

- A) NLKM B) LNMK C) NMLK
KMNL KMLN LKNM
KMNM MKLK LKNK
D) NMKL E) LKMN
LMKN NMKL
KLNL MNLN

1. I. BORA → 8546
LAPA → 9676
⇒ PARABOL = ?
A) 7656459 B) 7686459 C) 7565849
D) 7646859 E) 7545869
2. I. SERİN → BRONZ
ŞERİT → KRONA
⇒ ERİŞTE = ?
A) ROZNAK B) RONKBR C) RONKAR
D) ROBKAN E) ROZNAK
3. I. SİNA (MANİ) SEMA
II. HAVA (?) SADE
A) DEVE B) DEHA C) SEVA
D) DEDE E) DEVA
4. I. ROKA (KORSAN) NASA
II. RAGE (?) NOSE
A) GARENS B) GERSAN C) GORNOS
D) GARSON E) GARONE
5. TARİH + SAHİL = 01010
LİMAN + MİMAR = ?
A) 10101 B) 01101 C) 01011
D) 10011 E) 01110
6. (TEHRAN , MEHMAN) → x√x/x√
(GALATA , BAŞARI) = ?
A) x√x/x√ B) x√x/xx C) xx√/xx
D) x√x/√x E) x√√/xx

7. KARA TREN

↓↓↓↓ ↓↓↓↓

9797 ????

- A) 4364 B) 8536 C) 2357
D) 6304 E) 8391

10. ÖĞÜN → 5

İŞÇİ → 4

ÜÇÜZ → ?

- A) 2 B) 3 C) 4 D) 5 E) 6

8. GALATA = ?

A) ↓↓↑↑

B) ↑↑↑↑

C) ↑↓↑↑

D) ↓↑↑↑

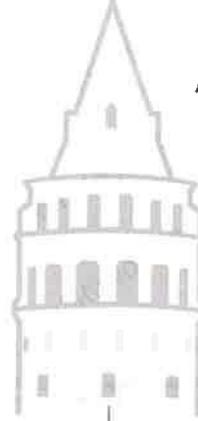
E) ↑↓↑↑

11. BİBER → 32

PATATES → 43

MAYDANOZ → ?

- A) 26 B) 35 C) 44 D) 53 E) 62



9. ○□●□ = ○□●□

□□□● = ?

- A) □□□● B) □□□● C) □□□●
D) □□□● E) □□□●

12. RODOS HEYKELİ = ?

A) 89197 2583544

B) 46061 7482493

C) 70203 6514508

D) 31910 2456478

E) 14345 6201079

1. HAYHAY $\xrightarrow{\Delta}$ YAHYAH
 SEKİNE $\xrightarrow{\Delta}$?
 A) ESİKEN B) EKİNES C) KİNESE
 D) KESENE E) İNEKSE

2. \square TİLKİ = İLKİT
 \square KARGA = ?
 A) AGRAK B) AKARG C) RGAKA
 D) GAKAR E) ARGAK

3. (LALE) \rightarrow LELA
 [HALE] \rightarrow ELAH
 [(ŞULE)] \rightarrow ?
 A) ŞELU B) ELUŞ C) LEŞU
 D) UŞEL E) ULŞE

4. $\overleftarrow{KLMN} = NMLK$
 $\overleftarrow{KLMN} = LKNM$
 $\overleftarrow{KLMN} = NKLM$ } $\Rightarrow 1234 - 1234 + 1234 = ?$
 A) 2143 B) 2341 C) 3124
 D) 3421 E) 4213

5. $\triangle 4513 = 5134$
 $\hexagon 4513 = 1345$
 $\square 4513 = 3514$ } \Rightarrow $\triangle abcd$
 A) acbd B) bcda C) adbc
 D) badc E) dbca

6. $\bigcirc \text{ saat} \rightarrow \text{tasa}$
 $\square \text{ saat} \rightarrow \text{asta}$
 $\nabla \text{ saat} \rightarrow \text{taas}$ } \Rightarrow $\bigcirc 9784 \Rightarrow ?$
 A) 7489 B) 4879 C) 7948
 D) 8497 E) 7849

7. EKMEK $\xrightarrow{\star}$ KEMKE $\xrightarrow{\bullet}$ KEMKE
KÖFTE $\xrightarrow{\star}$ X $\xrightarrow{\bullet}$ Y

- | | X | Y |
|----|-------|-------|
| A) | ÖFTEK | KETFO |
| B) | ETFÖK | ÖKFET |
| C) | EKÖFT | FTEKÖ |
| D) | ETFÖK | FÖKET |
| E) | KEFÖT | EFKÖT |

10. SALATA $\xrightarrow{\boxplus}$ ASALAT $\xrightarrow{\otimes}$ SALATA
PANCAR $\xrightarrow{\otimes}$ X $\xrightarrow{\boxplus}$ Y

- | | X | Y |
|----|--------|--------|
| A) | RPANCA | PRNAAC |
| B) | CARPAN | ACPRNA |
| C) | APCNRA | AAPCNR |
| D) | APCNRA | PCNRAA |
| E) | ANCARP | PRACNA |

8. ▲ ENGİNAR = RENGİNA
TARHANA ◊ = HANTARA
▲ ÜSKÜMRÜ ◊ = KUMUÖSR
▲ MUSAKKA ◊ = ?

- A) AKKAMUS B) SAKKAMU C) AMUSAKK
D) SAKAMUK E) USAKKAM

11. ✕ İSPANAK = PANAKIS
DOMATES ↓↓ = DMTSOAE
✕ KABURGA ↓↓ = RGAUAKB
✕ KOKOREÇ ↓↓ = ?

- A) KÇODERK B) RÇDOEKK C) OOEKKRÇ
D) ÇEROKOK E) KORKOEÇ



9. ◎ SERKAN = RESNAK
SELİME □ = MELİSE
◎ TARKAN □ = AKTNRA
◎ SEMİYE □ = ?

- A) ESİMEY B) YEMİSE C) YİSEME
D) İYESEM E) EMİYES

12. ▲ ANKARA = NAKAAR
SYDNEY ● = EYDNSY
▲ MADRİD ● = DİDRAM
▲ LONDRA ● = ?

- A) OLNDAR B) ARDNOL C) ALONDR
D) ONDRAL E) ARNDOL

1. $\nabla \square * \square \square = 23421$
 $\square \square \nabla \square * = 42123$
 $\square \nabla \square * \square = 34212$
 $* \square \square \nabla \square = 21234$
 $\Rightarrow \square \nabla * \nabla \square \square = ?$
- A) 332421 B) 221413 C) 113234
D) 224143 E) 443132

2. 82476 → TMAEB
27683 → CBTME
93487 → MBACS
31278 → BMEUC
73629 → ?
- A) SECAT B) SCTBM C) SECUM
D) SETCM E) STBUC

- 3.
- | | |
|------|------|
| FUAR | 5073 |
| NİNE | 8242 |
| RAZI | 9105 |
| EMİR | 5468 |
- \Rightarrow FERMAN = ?
- A) 385602 B) 125683 C) 536462
D) 206583 E) 425306

4. ASİMAN = 111111
SMAN = 010111
AİMA = 101110
SİMA = ?
- A) 011011 B) 101101 C) 011110
D) 111010 E) 0011101

5. GLT → 101010
LTA → 001011
AAA → 010101
GALATA → ?
- A) 101110 B) 011111 C) 110011
D) 011101 E) 111111

- 6.
- | | | | |
|-----|------|---|---------|
| I. | ADLİ | → | 0110110 |
| II. | SELK | → | 1001101 |
- \Rightarrow DELİ = ?
- A) 1010011 B) 0011110 C) 0111001
D) 1100011 E) 0001111

7.

I.	}	⇔	}	II.
☆○□*				ON MP
∞ + ☆○				
◇ X □ *				KO
□ * ∇ Δ				NK PO
∇ Δ ◇ X				

⇒ ∞ + ☆ ○ = ?

A) ON B) MP C) KO D) NK E) PO

10.

☆○ →	1111
∇○∇ →	11111
○☆∇ →	111111
⇒ ☆ = ?	

A) 1 B) 11 C) 111

D) 1111 E) 11111

8.

I.	}	⇔	}	II.
2417				● ○
5324				⊕ ⊗
6890				○ ●
1753				⊗ ○
2468				○ ⊕

⇒ 6890 = ?

A) ● ○ B) ⊕ ⊗

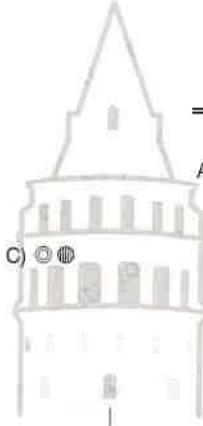
D) ⊗ ○ E) ○ ⊕

11.

ZAZA →	123123
AZA →	3123
ZAM →	12313
IZ →	3312
⇒ AZİM = ?	

A) 1231132 B) 3112331 C) 3123113

D) 1232313 E) 3123313



9.

I.	}	⇔	}	II.
METE				74
LEKE				67
TELE				45
KETE				57
TEKE				75

⇒ TEKELEME = ?

A) 5746 B) 6754 C) 7546

D) 7564 E) 5764

12.

I.	↔	II.
KES		31421
BAL		23121
SET		41223
PES		23523
SUS		21223

⇒ SET = ?

A) 31421 B) 23121 C) 41223

D) 23523 E) 21223

1.
$$\begin{array}{r} 5704 \\ 6172 \\ 4250 \\ 6031 \\ \hline 5243 \\ \text{I.} \end{array}$$
- $$\begin{array}{r} +\Delta X \nabla \\ \Rightarrow O \Leftarrow \Delta \\ + X \square \Leftarrow \\ X \Delta + \square \\ \hline \Rightarrow \square \nabla O \\ \text{II.} \end{array}$$
- 5407 = ?
- A) $+\Delta X \nabla$ B) $\Rightarrow O \Leftarrow \Delta$ C) $+ X \square \Leftarrow$
D) $X \Delta + \square$ E) $\Rightarrow \square \nabla O$

2.
$$\left. \begin{array}{l} \text{SGRE} \\ \text{FMSE} \\ \text{TKPN} \\ \text{HTQN} \\ \text{BLPN} \end{array} \right\} \Rightarrow \left\{ \begin{array}{l} \text{İÖJV} \\ \text{ISUV} \\ \text{SOJV} \\ \text{DXAZ} \\ \text{AYCZ} \end{array} \right.$$
- GLT = ?
- A) XOH B) YSB C) XÖB
D) YÖS E) XOS

3.
$$\left. \begin{array}{l} \text{MORE} \\ \text{HEAR} \\ \text{ZOOM} \\ \text{CUBE} \end{array} \right\} \equiv \left\{ \begin{array}{ll} 1496 & 5764 \\ 3204 & 8775 \end{array} \right.$$
- M + U + C + H = ?
- A) 11 B) 12 C) 13 D) 14 E) 15

4. SİNAN + SİNEM = 11100
DAMLA + HAMZA = ?
- A) 01110 B) 11000 C) 01011
D) 10001 E) 01101

5.
$$\frac{\text{MDPKSRF}}{\text{RFPMSKD}} = \frac{2}{5}$$
- $$\frac{\text{RPMFKDS}}{\text{FPMSKDR}} = ?$$
- A) $\frac{1}{6}$ B) $\frac{2}{5}$ C) $\frac{3}{4}$
D) $\frac{4}{3}$ E) $\frac{5}{2}$



6. ÇALIŞ → f%@f!≠
BAŞAR → ?
- A) +%*%f B) f!%*%] C) &%*%+
D) [%*%@ E) #%@!%

7. Rumeli Hisarı → ?
- A) 504371 219754 B) 135490 602417
C) 753609 892371 D) 427039 596148
E) 017639 438205

8. EKEL = 3262
 EKET = 7262
 LEME = 2523
 LEKE = 2623
 ⇒ ETEM = ?
 A) 2725 B) 3252 C) 3575
 D) 5272 E) 6252

9.

I.		II.
KULUÇKA	→	2743137
KULAÇ	→	?

 A) 73124 B) 37214 C) 21437
 D) 42137 E) 24317

10.

I.		II.
MASA	↔	▽□ ○▲
GAMA		▲▽
LASA		□◇ □▲
MATA		
SAGA		

 ⇒ GALATA = ?
 A) ◇□▽ B) ▽□◇ C) ▽○◇
 D) □▲○ E) □○▲

11. İSTİNYE = 4714385
 ⇒ $E^N + \sqrt{YI} = ?$
 A) TEN B) İTI C) İSY
 D) NTE E) TİS

12. ★ KİRİŞ → İŞKİR
 ★★★ TEĞET → ?
 A) ETTEĞ B) TTEĞE C) ĞETTE
 D) ĞTETE E) EĞETT

13. AMA → 1212121
 ASA → 12121121
 SMS → 21221
 ⇒ A = ?
 A) 2 B) 12 C) 21 D) 212 E) 121

14. (KASA, TAKI) → ASKI
 (ADET, KERE) → TERE
 (ICAT, SENE) → ?
 A) CANE B) İTSE C) TANE
 D) CASE E) İNCE

1. MEZUN \rightarrow \ominus \rightarrow ZEMNU \rightarrow \square \rightarrow NUM7F
SINAV \rightarrow \square \rightarrow I \rightarrow \ominus \rightarrow II

- | | I | II |
|----|-------|-------|
| A) | NISVA | VASNI |
| B) | INAVS | ANISV |
| C) | AVNSI | NVAIS |
| D) | ISANV | NVAIS |
| E) | AVSIN | INSAV |

2.

I.	II.
BAKIY	\rightarrow 11101100
KYAT	\rightarrow 00100111
LIYA	\rightarrow 00011110
BAYAT	\rightarrow ?

- A) 10100111 B) 11101001 C) 11000011
D) 11000111 E) 11100011

4. Kar \rightarrow $\circ\circ\circ\circ\circ\circ$
ara \rightarrow $\circ\circ\circ\circ\circ$
rar \rightarrow $\circ\circ\circ\circ$
KK \rightarrow ?

- A) $\circ\circ$ B) $\circ\circ\circ\circ$ C) $\circ\circ\circ$
D) $\circ\circ\circ\circ\circ$ E) $\circ\circ\circ\circ\circ\circ$

5. İSTANBUL = 42753196
 \Rightarrow BNSA x T = ?

- A) İNAT B) TABU C) USTA
D) İNAL E) LİST

6. I. KADI (CADI) İCAT
II. HADİ (?) EKER

- A) DEHA B) KARE C) KERE
D) DERE E) KEDİ

3.

- A) mras B) rmsa C) asmr
D) arms E) rsma

7.

SUAL	4758
ASIL	4287
USLU	5485
SALI	?

- A) 2748 B) 4728 C) 4872
D) 2478 E) 8742

8.

☒	○	⊞	⊙	⊕
⊕	⊗	⊞	○	⊞
⊞	○	⊞	⊙	☒

I ← → II

SAMİR
RAMİL
LEMAN

⊗ ⊕ ⊞ ⊙ ⊕ ☒ ○ = ?

A) ESMİRA B) AMİNE C) SAMİRA
D) SALİME E) ELMİRA

11.

Diş → 2
ÖĞE → 3
ÇİĞ → ?

A) 0 B) 1 C) 2 D) 3 E) 4

12.

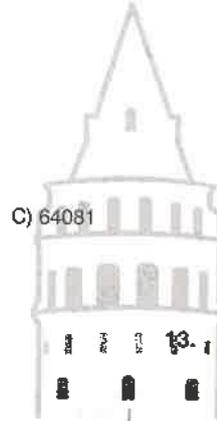
ERİK → 22
KIRAZ → 23
ŞEFTALİ → ?

A) 25 B) 34 C) 43 D) 52 E) 61

9.

KADİR	}	⇒ MELİS = ?
SADIK		
MELİS		
KASIM		
ESMER		

A) 14683 B) 39276 C) 64081
D) 96395 E) 14075



13.

GALATA → 4
EĞİTİM → 5
BAŞARI → ?

A) 2 B) 3 C) 4 D) 5 E) 6

10.

628	}	⇒ ?
406		
240		

A) 173 B) 397 C) 513
591 713 975
795 951 397
D) 763 E) 915
197 379
519 135

14.

TABAK → 4
ORMAN → 3
KEBAP → ?

A) 3 B) 4 C) 5 D) 6 E) 7

1. $\left. \begin{array}{l} \text{KIYI} \\ \text{İNCİ} \\ \text{SİNİ} \\ \text{İLM} \\ \text{İYNE} \end{array} \right\} \Leftrightarrow \left\{ \begin{array}{l} 1100 \\ 1010 \\ 0111 \\ 1001 \\ 0101 \end{array} \right.$
- \Rightarrow KIYI = ?
- A) 1100 B) 1010 C) 0111
D) 1001 E) 0101

2. $\left. \begin{array}{l} 64232 \\ 47873 \\ 73066 \\ 26207 \\ 58994 \end{array} \right\} \Leftrightarrow \left\{ \begin{array}{l} 11111 \\ 11111 \\ 11111 \\ 11111 \\ 11111 \end{array} \right.$
- \Rightarrow 47873 = ?
- A) 11111 B) 11111 C) 11111
D) 11111 E) 11111

3. $\left. \begin{array}{l} \text{KASABA} \\ \text{MASRAF} \\ \text{SAHARA} \\ \text{TAYTAY} \\ \text{ARAFAT} \end{array} \right\} \Leftrightarrow \left\{ \begin{array}{l} 111011 \\ 010101 \\ 110110 \\ 010111 \\ 010110 \end{array} \right.$
- \Rightarrow SAHARA = ?
- A) 111011 B) 010101 C) 110110
D) 010111 E) 010110

4. $\begin{array}{cccccc} \text{S} & \text{E} & \text{V} & \text{D} & \text{A} & \text{M} & & \text{T} & \text{U} & \text{T} & \text{S} & \text{A} & \text{K} \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 4 & 2 & 2 & 3 & 4 & & ? & ? & ? & ? & ? & ? \end{array}$
- A) 222134 B) 222333 C) 212134
D) 212132 E) 212133

5. $\begin{array}{cccccc} \text{Ç} & \text{İ} & \text{Ğ} & \text{D} & \text{E} & \text{M} & \Rightarrow & \text{K} & \text{E} & \text{Ş} & \text{K} & \text{Ü} & \text{L} \\ 2 & 2 & 4 & 2 & 4 & 4 & & ? & ? & ? & ? & ? & ? \end{array}$
- A) 342332 B) 332332 C) 343343
D) 342232 E) 342323

6. I. ÇİĞ KÖFTE \rightarrow 224 33324
II. GÜL BAHÇE \rightarrow ?
- A) 332 34324 B) 343 3344 C) 343 34434
D) 332 33324 E) 332 33434

7.

YAYA	7575
AYLA	7657
HEYA	7548
HALE	?

- A) 6748 B) 7864 C) 4678
D) 7486 E) 6578

8.

7432	○↑▽□
2575	↑○↑↑
5443	□↑▽▽
3752	?

- A) ○□↑↑ B) ○↑↑□ C) ↑▽○↑
D) ↑□↑▽ E) ▽↑↑○

9.

ABCB	KPRP
CEED	MSKM
BFAB	RPPO
DAEF	?

- A) ROSM B) MROS C) PORS
D) MOSR E) RPOM

10.

■□□	○■○	□⊕■
KKL	LMM	NLK

⇒ ⊕ ■ □ ○ = ?

- A) KLMN B) LKMN C) LNMK
D) KMLN E) KNLM

11.

7576	8660	5875
4232	3193	1442

⇒ 6788 = ?

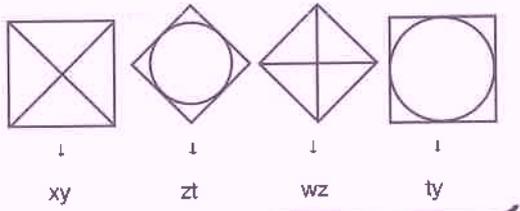
- A) 2311 B) 4221 C) 4331
D) 2131 E) 4399

12.

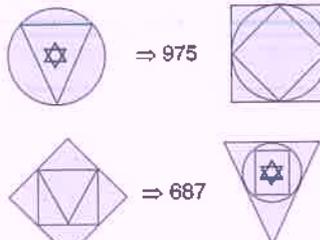
SARI	ARPA	DARI
3752	6535	3852

⇒ PRIA = ?

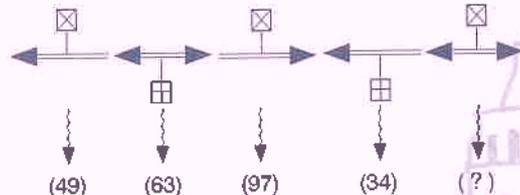
- A) 6375 B) 2835 C) 2635
D) 8375 E) 6285

1. 

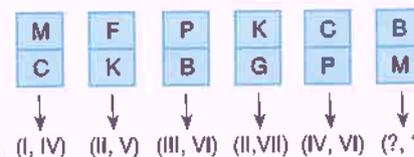
A) zty B) tzw C) xyw
D) xyz E) tzx

4. 

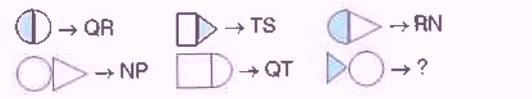
A) 6795 B) 7985 C) 5896
D) 7965 E) 6987

2. 

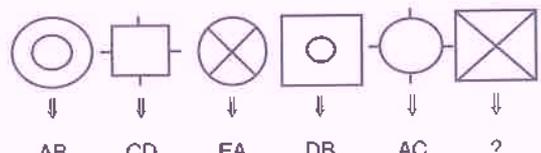
A) 96 B) 39 C) 74
D) 67 E) 46

5. 

A) II, III B) I, V C) III, VII
D) I, III E) I, VI

3. 

A) PT B) SQ C) PS D) TR E) QP

6. 

A) BC B) DE C) AD
D) CE E) BE

7.

C	E	L	S	N
K	R	A	I	B
U	T	F	P	Z
D	M	İ	G	O

RİZE 22 43 35 12

BOLU ? ? ? ?

- A) 25 45 32 23
- B) 24 35 41 14
- C) 25 45 13 31
- D) 24 35 44 34
- E) 25 34 42 14

8.

&	∅	f	∫
V	∈	%	#
Σ	+	\$!
@	?	X	=

(2, 3) → %

(4, 4) → =

(3, 1) → x, (1, 2) → Y

- | | | |
|----|---|---|
| | X | Y |
| A) | Σ | V |
| B) | f | V |
| C) | Σ | ∈ |
| D) | f | ∅ |
| E) | Σ | ∅ |

9.

X	a	7	○	▽
3	Y	b	8	□
◇	2	Z	c	9
©	Δ	1	T	d

c1X □ → 15 12 1 18

???? → 6 17 14 10

- A) b 9 ○ Z
- B) Y ▽ 8 b
- C) a 7 © T
- D) X ◇ 3 a
- E) d 2 ○ Z

10.

V	R	B	M
B	A	Ø	R
R	M	A	N
M	B	R	A

B V R A B = A R M R A B = 487562

M R B R M A = ?

- A) 5 3 6 5 6 2
- B) 5 4 2 4 7 3
- C) 6 7 4 5 3 5
- D) 7 3 6 4 5 4
- E) 7 2 6 2 6 3

1.

Can	C34712
Feyza	F561130
Emre	E45920
Sebahat	S781556
Müslüm	?

- A) M641248 B) M69189 C) M671342
D) M681448 E) M891772

2.

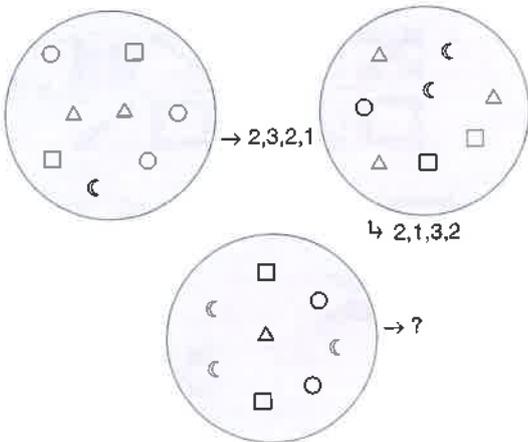
1	2	3
aBc	mnA	Prs
4	5	6
pCR	ENx	bDe
7	8	9
Zdf	XFy	MYz

AbCd → 22264477

xYaZ → ?

- A) 55999177 B) 55599177 C) 59991177
D) 5559917 E) 59911177

3.



- A) 2,1,2,3 B) 2,2,1,3 C) 2,2,3,1
D) 2,1,3,2 E) 2,3,1,2

4.

Ocak	O 1448
Şubat	Ş 251015
Mart	M 341216
Nisan	N 452025
Mayıs	?

- A) M552530 B) M452016 C) M653011
D) M541220 E) M552510

5.

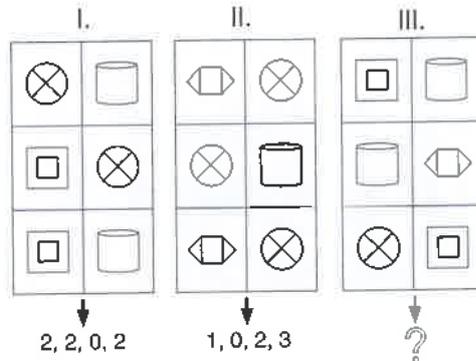
x5=	M+a	%fR
4ZØ	\$mz	Dld
∞Ar	Y-8	X*y

\$+y5 → 52299911

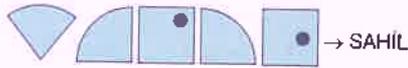
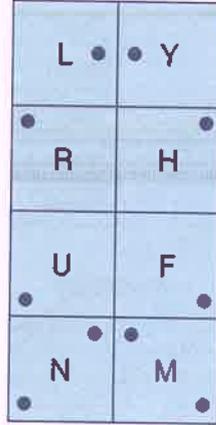
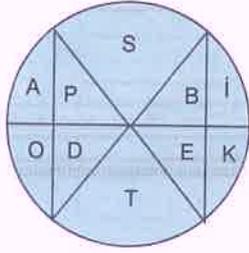
D%=∞ → =

- A) 631117 B) 6331177 C) 6331777
D) 6631117 E) 66631177

6.



- A) 2, 1, 2, 1 B) 2, 1, 1, 2 C) 1, 2, 1, 2
D) 2, 2, 1, 1 E) 1, 2, 2, 1



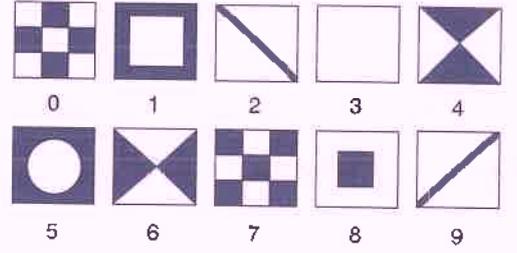
Yukardaki şekle göre 7. – 8. sorulara cevaplayınız.

Answer the questions 7 – 8 according to the figure above.

7. → ?
- A) TALİM B) TAYİN C) TARİF
D) TAHİN E) TAMİR

8. DUMAN → ?

- A)
- B)
- C)
- D)
- E)



Yukardaki şekle göre 9. – 10. sorulara cevaplayınız.

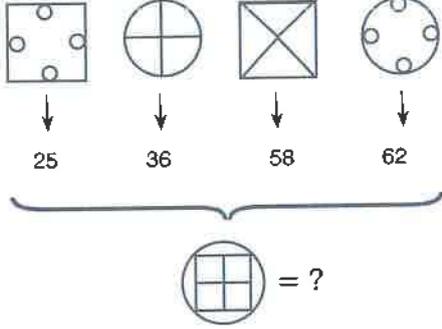
Answer the questions 9 – 10 according to the figure above.

9. $(\text{diagonal} \times \text{square} - \text{diagonal}) = ?$

- A)
- B)
- C)
- D)
- E)

10. $(\text{checkerboard} \times \text{diagonal}) + (\text{diagonal} \times \text{diagonal}) = ?$

- A)
- B)
- C)
- D)
- E)

1. 

A) 265 B) 386 C) 538
D) 563 E) 825

2.

D	E	Ğ	İ	Ş	T	İ	R	M	E
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
2	4	4	2	2	2	2	3	4	4
Ç	İ	Ç	E	K	L	E	Ş	M	E
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
?	?	?	?	?	?	?	?	?	?

A) 2224342344 B) 2234323244
C) 2224324244 D) 2233423244
E) 2223423244

3.

TASA	ASKI	SAAT	KISA
7375	3817	7753	?

A) 1738 B) 1378 C) 3587
D) 5837 E) 7318

4.

87931	}	78613
63179		63871
16398		39167
39817		16738
91783		91386

⇒ 63179 = ?

A) 78613 B) 63871 C) 39167
D) 16738 E) 91386

5.

TZYX	}	= UQTX = ?
XVZT		
UQTX		
VYTX		
RTQX		

A) 9213 B) 3629 C) 8493
D) 6193 E) 0943

6.

flll	}	5219
flff		3954
lfff		4532 ⇒ flll = ?
flll		9123
llff		2341

A) 5219 B) 3954 C) 4532
D) 9123 E) 2341

7.

ERİK	E42850
KAYISI	K642488
NAR	N31334
ÇİLEK	?

- A) Ç531575 B) Ç527108 C) Ç542024
D) Ç538156 E) Ç531568

8.

I.	II.
KARAMELİZE ÇEŞİTLİLİK KARŞILAŞMA	1101011111 1101101000 1010010101

⇒ ARŞİMET = ?

- A) 1100100 B) 1001100 C) 1010100
D) 1000110 E) 1010101

9.

		a
b		
	c	

→ 3a + 2b + 6c

a		
	b	
		c

→ a + 4b + 9c

	7	
		4
2		

→ ?

- A) 38 B) 44 C) 50 D) 56 E) 68

10.

$$\left. \begin{array}{l} + + - + \\ * X H - \\ H X + - \\ - ** H \\ X H + X \end{array} \right\} \Rightarrow H X + - = ?$$

- A) BDFA B) ACCB C) DBED
D) CDBA E) FEAF

11.

$$\left. \begin{array}{l} 89753 \\ 37594 \\ 45987 \\ 74835 \\ 58349 \end{array} \right\} \begin{array}{l} 93478 \\ 38594 \\ 57349 \\ 45987 \\ 84753 \end{array}$$

⇒ 37594 = ?

- A) 93478 B) 38594 C) 57349
D) 45987 E) 84753

12.

$$\begin{array}{c} \bigcirc \bullet \bullet \bullet \bullet = \bigcirc \bullet \bullet \bullet \bullet \\ = \bullet \bigcirc \bullet \bullet \bullet \bullet = ? \end{array}$$

- A) $\bigcirc \bullet \bullet \bullet \bullet$ B) $\bullet \bullet \bullet \bullet \bigcirc \bigcirc$
C) $\bullet \bigcirc \bullet \bullet \bullet \bullet$ D) $\bullet \bigcirc \bullet \bullet \bullet \bullet$
E) $\bullet \bigcirc \bullet \bullet \bullet \bullet$

1. (ACİL) = İLAC

→ ACİL = LACİ □

ACİL □ = CİLA

⇒ (→İNEK) = ?

- A) NEKİ B) EKİN C) ENİK
D) İNEK E) KİNE

2. TSFH ⊕ PQML ⊕ NBYZ ⊕ RDVK = HMBR

XJNC ⊕ RSDE ⊕ LPKH ⊕ BZTM = CDPB

HRZG ⊕ MXLV ⊕ NTJD ⊕ AUQY = ?

- A) GVDY B) HMNA C) RXTU
D) GLTA E) HXJY

3. HASTAHANE ⇒ ?

- A) 
B) 
C) 
D) 
E) 

4.

KHCGI

GCIBA

BFIDH

BFIGE

FAFBI

⇒ GCIBA = ?

- A) 26948 B) 78309 C) 26905
D) 03921 E) 61629

5.

46759

79456

64978

98647

87594

DFKEI

KIDEF

FDIKH

IHFDK

HKEID

⇒ HKEID = ?

- A) 46759 B) 79456 C) 64978
D) 98647 E) 87594

6. KLMN ↔ MNKL

KLMN ↔ MLKN

2X7Y ↔ A, 2X7Y ↔ B

A - B = 495 ⇒ max(X + Y) = ?

- A) 11 B) 12 C) 13 D) 14 E) 15

7.

KL OM PR MS RK (?)

A) PL B) OK C) RS
D) LO E) KM

8.

TASLAK	364762
KISRAK	864412
BERRAK	864598
KORKAK	464408

→ SOKRAT = ?

A) 604827 B) 864027 C) 867204
D) 460258 E) 648754

9.

3 1 2 4 8

0 XY

→ XY = ?

A) B) C)
D) E)

10.

I. ÇİĞDEM → 224244
II. SAĞLAM → 134234
III. ÖĞÜTME → ?

A) 332434 B) 344244 C) 343344
D) 343244 E) 343234

11.

İRMİK
TİTİZ
ÇEVİZ
SİNEK
ÇİÇEK

→ SİNEK = ?

A) 11100 B) 10010 C) 01011
D) 10011 E) 01000

∅	3	B	#
A	Σ	□	5
▽	7	%	☆
+	○	∨	C

B7%+ → 13 32 33 41

A*Σ5 → ? ? ? ?

- A) 21 33 32 24
B) 22 34 31 23
C) 21 34 22 24
D) 24 33 21 31
E) 22 24 33 34

1.

3461	}	XYZZ
8487		XVTY
3132		UTYX
3782		XUOZ
7613		OVOU

 ⇒ XVTY = ?
- A) 8487 B) 3461 C) 3132
D) 3782 E) 7613

2.

TAS	}	549
TEK		519
SAT		319
KET		945
SET		913

 ⇒ KAS = ?
- A) 513 B) 345 C) 543
D) 354 E) 351

3.

△▽▷◀	}	FEBD
◀△○▽		ADEB
▽▷◀○		ABFE
○◀▷▽		EBDA
○▷△▽		DFAE

 ⇒ △▽▷◀
- A) FEBD B) ADEB C) ABFE
D) EBDA E) DFAE

4.

UŞAK	8513
BOLU	3704
KARS	6258
URFA	5923
- ⇒ BURSA = ?
- A) 37256 B) 56234 C) 43265
D) 42675 E) 62813

5.

Z	R	M	C	S	H
S	H	T	R	M	C
- ↑ ↓ ↑ ↓ ↑ ↓ ↑ ↓ ↑ ↓ ↑ ↓
- □ △ □ △ ?
- A) ▽ B) □ C) ●
D) ● E) ▽

6.

I.	II.	III.
1,2,2,1	3,1,0,2	?
- A) 2,1,1,2 B) 1,1,2,2 C) 1,2,1,2
D) 2,1,2,1 E) 2,2,1,1

7. $\left. \begin{array}{l} \text{CBAD} \\ \text{DBCF} \\ \text{EBCF} \\ \text{CADF} \\ \text{HAGF} \end{array} \right\} \Rightarrow \text{EBCF} = ?$
- A) 8914 B) 5984 C) 1084
D) 8091 E) 6084

8. $\left. \begin{array}{l} \text{⊗} \ominus \boxplus \\ \text{⊗} \oplus \boxplus \\ \text{⊗} \ominus \boxtimes \\ \text{⊗} \oplus \boxtimes \\ \text{⊗} \oplus \boxtimes \end{array} \right\} \Rightarrow \text{⊗} \oplus \boxtimes = ?$
- A) BAR B) TIB C) RAT
D) BIR E) RIB

9.

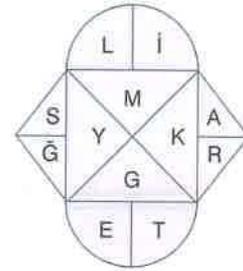
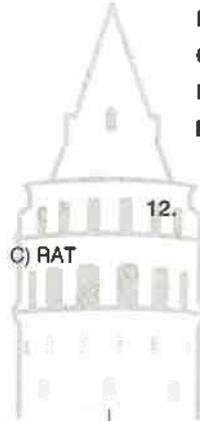
K	A	Ş	A	Ğ	İ
3	3	2	3	4	1
- $\Rightarrow \text{GERÇEK} = ?$
- A) 343343 B) 243344 C) 343243
D) 433233 E) 343233

10.

1234	3221	4413	2334
!x!f	!f!x	!f!x	?
- A) x!f!x B) f!x!f C) !x!f
D) x!f!x E) f!f!f

11.

A	B
4xhe	+K\$1
C	D
%2ml	f!8z
E	F
dt∞6	3Σy*
- $2 + \infty x \rightarrow \text{CCBEEEA}$
 $4 \emptyset Y \% \rightarrow ?$
- A) ADDFFFC
B) ADDFFC
C) AADDFFCC
D) ADDFFFC
E) AADDFFFC



GALATA \rightarrow

EĞİTİM \rightarrow ?

- A)
- B)
- C)
- D)
- E)

1. 11, 17, 23, 29, 35, ?

- A) 39 B) 40 C) 41 D) 42 E) 43

2. 33, 32, 29, 24, 17, ?

- A) 9 B) 8 C) 7 D) 6 E) 5

3. 3, 6, 12, 24, 48, ?

- A) 72 B) 84 C) 96 D) 108 E) 120

4. 256, 196, 144, 100, ?

- A) 92 B) 81 C) 76 D) 64 E) 55

5. 7, 4, 8, 5, 10, ?

- A) 4 B) 5 C) 6 D) 7 E) 8

6. 45, 15, 18, 6, 9, ?

- A) 1 B) 2 C) 3 D) 4 E) 5

7. 128, 98, 72, 50, ?

- A) 48 B) 46 C) 36 D) 32 E) 24

8. 2, 12, 30, 56, ?

- A) 70 B) 81 C) 84 D) 90 E) 98

9. 11, 13, 17, 19, 23, ?

- A) 25 B) 26 C) 27 D) 28 E) 30

10. 5, 6, 8, 12, 20, ?

- A) 32 B) 34 C) 36 D) 38 E) 40

11. 15, 17, 21, 24, 33, ?

- A) 33 B) 34 C) 37 D) 39

12. 7, 8, 10, 16, 40, ?

- A) 80 B) 96 C) 128 D) 144 E) 160

13. 43, 41, 37, 31, 29, ?

- A) 27 B) 26 C) 24 D) 23 E) 21

14. 54, 53, 49, 40, 24, ?

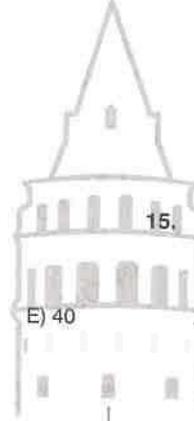
- A) 6 B) 4 C) 2 D) -1 E) -2

15. 32, 34, 38, 46, 49, 58, ?

- A) 75 B) 78 C) 85 D) 88 E) 98

16. 576, 24, 4, 2, ?

- A) 2 B) $\frac{1}{2}$ C) 1
D) $\frac{1}{4}$ E) $\frac{1}{8}$



1. 1, 2, 4, 4, 7, 8, A, B

$\Rightarrow B - A = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

2. 8, 16, 27, X, 64, 74, Y, 133

$\Rightarrow X + Y = ?$

- A) 155 B) 161 C) 173 D) 177 E) 184

3. 5, 14, 16, 42, 49, 126, X, Y

$\Rightarrow Y - X = ?$

- A) 210 B) 220 C) 230 D) 240 E) 250

4. 5, 7, 9, 2, A, 9, 17, 11, 21, B

$\Rightarrow A + B = ?$

- A) 27 B) 30 C) 33 D) 36 E) 39

5. 40, 36, 32, 25, 24, 16, A, B

$\Rightarrow A + B = ?$

- A) 21 B) 23 C) 25 D) 27 E) 30

6. 49, 36, 64, 24, 79, 63, X, Y

$\Rightarrow X - Y = ?$

- A) 50 B) 54 C) 58 D) 62 E) 66

7. 81, 65, 54, 41, 36, 45, X, Y

$\Rightarrow X + Y = ?$

- A) 64 B) 68 C) 72 D) 76 E) 80

8. 22, 61, 41, 52, 60, 63, ?, ?, 71, 46

- A) 50,97 B) 52,94 C) 61,92 D) 70,84 E) 72,18

9. $-2, 2, 4, 2, -2, -4, ?, ?$

- A) -2,2 B) 2,-4 C) -2,4 D) 4,-2 E) 2,-2

10. $4, 2, ?, 8, 14, 22, ?, 58$

- A) 5,35 B) 6,36 C) 5,32 D) 7,38 E) 8,40

11. $\sqrt{7}, 4, 5, \sqrt{34}, ?$

- A) 6 B) $\sqrt{39}$ C) $\sqrt{43}$ D) $\sqrt{45}$

12. $7,2 \rightarrow 5,7 \rightarrow 4,3 \rightarrow 3,0 \rightarrow ?$

- A) 2,1 B) 2,0 C) 1,9 D) 1,8 E) 1,7

13. $1, 2, 7, 20, 61, ?, ?$

- A) 181,545 B) 182,547 C) 183,550
D) 184,551 E) 185,555

14. $-17, -15, -8, 11, 48, ?, ?$

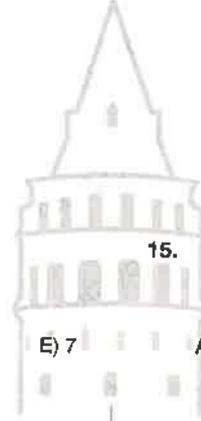
- A) 107,196 B) 108,198 C) 109,200
D) 110,202 E) 111,205

15. $14\sqrt{2}, 33\sqrt{3}, 49\sqrt{6}, 82\sqrt{4}, ?$

- A) $46\sqrt{6}$ B) $72\sqrt{3}$ C) $84\sqrt{4}$ D) $91\sqrt{3}$ E) $96\sqrt{6}$

16. $17,1 : 15,9 : 13,5 : 8,7 : ?$

- A) 1,1 B) 0,3 C) -0,9 D) -1,1 E) -1,7



1. 21, 4, 14, 33, 16, ?

- A) 5 B) 6 C) 7 D) 8 E) 9

2. 25, 36, 56, 67, 78, ?

- A) 79 B) 83 C) 85 D) 87 E) 98

3. 11, 14, 19, 28, 55, ?

- A) 49 B) 56 C) 63 D) 68

4. 109, 87, 65, 43, ?

- A) 10 B) 12 C) 19 D) 21 E) 24

5. 11, 21, 42, 63, 73, ?

- A) 76 B) 82 C) 85 D) 91 E) 94

6. 32, 37, 47, 58, 71, ?

- A) 76 B) 79 C) 81 D) 88 E) 90

7. 17, 24, 32, 38, 62, ?

- A) 74 B) 76 C) 78 D) 80 E) 82

8. 28, 36, 39, 48, 52, ?

- A) 54 B) 56 C) 59 D) 63 E) 68

9. 48, 56, 62, 68, 76, ?

- A) 79 B) 81 C) 83 D) 85 E) 87

10. 100, 121, 144, 196, ?

- A) 385 B) 493 C) 566 D) 698 E) 799

11. 110, 120, 131, 142, ?

- A) 170 B) 166 C) 149 D) 133

12. 778, 616, 366, 216, ?

- A) 126 B) 133 C) 147 D) 156 E) 159

13. 15, 26, 40, 16, 37, ?

- A) 45 B) 49 C) 53 D) 58 E) 60

14. 14, 25, 49, 169, 256, ?

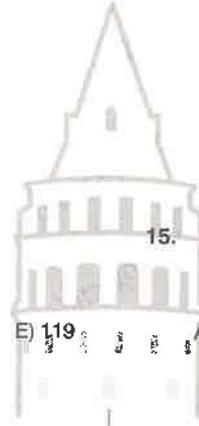
- A) 169 B) 196 C) 225 D) 256 E) 289

15. 17, 24, 24, 30, 18, ?

- A) 27 B) 36 C) 42 D) 51 E) 63

16. 21, 24, 42, 36, 45, ?

- A) 28 B) 36 C) 48 D) 54 E) 56



1. $\frac{7}{9}, \frac{11}{14}, \frac{13}{23}, \frac{17}{37}, \frac{19}{60}, ?$

A) $\frac{21}{91}$

B) $\frac{21}{95}$

C) $\frac{23}{97}$

D) $\frac{23}{99}$

E) $\frac{29}{103}$

2. $\frac{15}{21}, ?, \frac{21}{24}, \frac{29}{40}, \frac{45}{54}, \frac{77}{91}$

A) $\frac{17}{23}$

B) $\frac{19}{22}$

C) $\frac{17}{25}$

D) $\frac{19}{27}$

E) $\frac{20}{22}$

3. $\frac{9}{5}, \frac{9}{11}, \frac{16}{18}, \frac{34}{18}, \frac{23}{59}, ?$

A) $\frac{67}{28}$

B) $\frac{72}{25}$

C) $\frac{26}{34}$

D) $\frac{26}{23}$

E) $\frac{95}{25}$

4. $\frac{11}{5}, \frac{12}{13}, \frac{17}{19}, ?, \frac{31}{33}, \frac{40}{41}$

A) $\frac{24}{25}$

B) $\frac{41}{23}$

C) $\frac{22}{27}$

D) $\frac{26}{23}$

E) $\frac{95}{25}$

5. $\frac{2}{4}, \frac{3}{9}, \frac{5}{52}, \frac{6}{\square}, \frac{8}{46}, \frac{\circ}{18}$

$\circ + \square = ?$

A) 45

B) 54

C) 63

D) 72

E) 81

6. $\frac{1}{8}, \frac{1}{4}, \frac{3}{\square}, \frac{1}{2}, \frac{\circ}{8}, \frac{3}{4}$

$\circ + \square = ?$

A) 11

B) 13

C) 15

D) 72

E) 19

7. $3\frac{1}{2}, 4\frac{1}{3}, 3\frac{4}{5}, ?, 2\frac{10}{11}, 2\frac{11}{13}$

C) $\frac{26}{34}$

A) $2\frac{5}{6}$

B) $3\frac{3}{7}$

C) $4\frac{5}{9}$

D) $2\frac{7}{8}$

E) $3\frac{4}{7}$

8. $1\frac{1}{3}, 1\frac{2}{6}, 1\frac{7}{9}, 2\frac{2}{15}, 2\frac{16}{24}, ?$

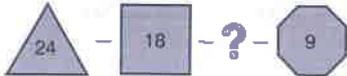
A) $1\frac{20}{36}$

B) $3\frac{18}{39}$

C) $2\frac{15}{37}$

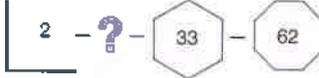
D) $3\frac{11}{39}$

E) $3\frac{13}{37}$

9. 

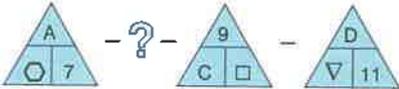
A)  B)  C) 

D)  E) 

10. 

A)  B)  C) 

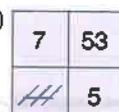
D)  E) 

11. 

A)  B)  C) 

D)  E) 

12. 

A)  B)  C) 

D)  E) 

13. [4,16] [9,36] [14,56] ?

A) [17,51] B) [18,72] C) [19,76]
D) [19,49] E) [18,54]

14. [77,91] [49,62] [36,45] ?

A) [6,12] B) [18,27] C) [36,44]
D) [29,40] E) [15,21]

15. (25,5) : (28,7) : (33,11) : ?

A) (48,12) B) (39,13) C) (65,17)
D) (32,16) E) (26,13)

16. (18,9) : (46,8) : ? : (63,6)

A) (54,5) B) (72,5) C) (52,7)
D) (94,7) E) (61,6)

1.

2	3	5	8	A	17
1	3	6	9	27	B

$\Rightarrow A + B = ?$

- A) 39 B) 43 C) 47 D) 51 E) 55

2.

13	17	25	32	37	A
3	7	10	B	21	28

$\Rightarrow A - B = ?$

- A) 41 B) 49 C) 56 D) 64 E) 68

3.

2	8	7	32	M	R
2	4	18	12	50	30

$\Rightarrow M + R = ?$

- A) 79 B) 82 C) 85 D) 88 E) 91

4.

3	63	9	46	21	M
14	5	51	12	35	R

$\Rightarrow M - R = ?$

- A) 25 B) 29 C) 36 D) 39 E) 42

5.

I.	II.
12	5
13	10
32	13
42	20
61	37
?	?

- A) 80,44 B) 71,40 C) 63,45
-
- D) 52,29 E) 44,32

6.

I.	II.
4,9	3,4
?	3,5
3,4	3,7
2,8	4,1
2,3	?
1,9	6,5

- A) 4,1 : 4,9 B) 4,3 : 5,5 C) 4,1 : 5,1
-
- D) 4,3 : 5,3 E) 3,9 : 4,7

7.

I.	II.
4	72
6	53
10	34
14	25
?	29
26	?

- A) 19,95 B) 19,91 C) 21,89
-
- D) 22,85 E) 23,72

8.

1.	2.	3.	4.	...	16.
9	14	19	24	...	?

- A) 75 B) 78 C) 81 D) 84 E) 87

9.

1.	2.	3.	4.	...	20.
99	96	93	90	...	?

- A) 48 B) 45 C) 42 D) 39 E) 36

10.

1.	2.	3.	4.	5.	...	25.
14	18	20	24	26	...	?

- A) 74 B) 86 C) 88 D) 90 E) 92

11.

1.	2.	3.	4.	5.	...	77.
25	30	28	33	31	...	?

- A) 100 B) 121 C) 139 D) 152 E) 167

12.

4.	2
5.	11
6.	20
7.	29
⋮	⋮
n.	290

⇒ n = ?

- A) 36 B) 37 C) 38 D) 39 E) 40

13.

20.	123
21.	130
22.	121
23.	128
24.	119
⋮	⋮
70.	?

- A) 70 B) 71 C) 72 D) 73 E) 74

14.

18.	1
19.	2
20.	2
21.	3
22.	3
23.	3
24.	4
⋮	⋮
125.	?

- A) 14 B) 15 C) 16 D) 17 E) 18



1.

11	12	G	25	41	66
15	20	27	L	51	68
61	60	58	54	T	30

$G + L + T = ?$

- A) 80 B) 85 C) 90 D) 95 E) 100

2.

1	3	K	18	21	63
4	1	10	6	L	17
1	M	12	32	80	192

$K + L - M = ?$

- A) 22 B) 24 C) 26 D) 28 E) 30

3.

2	1	2	2	4	G
6	9	15	27	51	L
3	2	3	8	31	T

$G + L + T = ?$

- A) 249 B) 253 C) 257 D) 261 E) 265

4.

K	25	32	39	46	53
264	625	L	1281	2036	309
27	32	37	51	M	61

$K + L - M = ?$

- A) 55 B) 66 C) 77 D) 86 E) 99

5.

A	B	C
1	3	6
4	15	27
7	27	48
9	35	62

$A = 12 \Rightarrow B + C = ?$

- A) 110 B) 120 C) 130
-
- D) 140 E) 150

6.

A	B	C
2	16	23
4	14	65
5	13	56
7	11	77

$B = 15 \Rightarrow \frac{C}{A} = ?$

- A) 14 B) 16 C) 18
-
- D) 20 E) 22

7.

A	B	C
4	6	4
6	9	21
8	12	56
10	15	115

$C = 329 \Rightarrow 2A + B = ?$

- A) 28 B) 35 C) 42
-
- D) 49 E) 56

8. I. 2, 4, 6, 10, 16
 II. 7, R, 9, S, 20
 III. 2, 4, 8, 6, 3
 IV. 1, M, 12, E, 3

$$R \cdot S + M \cdot E = ?$$

- A) 52 B) 55 C) 58 D) 61 E) 64

9. I. 5, 10, 8, 16, 14
 II. 6, 4, 8, A, 12
 III. 39, 36, 12, 9, 3
 IV. 54, B, 15, C, 2

$$A + B + C = ?$$

- A) 21 B) 23 C) 25 D) 27 E) 29

10. I. 1, 4, 13, 40, 121
 II. 7, K, 13, L, 37
 III. 6, 12, 15, 21, 24
 IV. M, 34, 41, 46, N

$$K + L + M - N = ?$$

- A) 5 B) 6 C) 7 D) 8 E) 9

11. I. 2, 4, 12, 48,
 II. X, Y, 42, 168,
 III. 3, 5, 9, 17,
 IV. 5, Z, T, 44,

$$X + Y + Z + T = ?$$

- A) 42 B) 44 C) 46 D) 48 E) 50

12. I.

7	3	9	2
6	10	4	11
12	20	8	22
3	2	8	4

 II.

K	7	5	8
8	L	5	2
24	9	M	6
6	9	6	N

$$\Rightarrow \sqrt{K + L + M + N + 10} = ?$$

- A) 4 B) 5 C) 6 D) 7 E) 8

13. I.

2	6	4	12
4	12	16	32
2	6	4	12
3	9	9	21

 II.

P	2	1	4
3	6	9	Q
7	14	R	70
2	S	4	10

$$\frac{P+Q+R}{S} = ?$$

- A) 14 B) 15 C) 16 D) 17 E) 18

14. I.

2	3	4	5
6	9	12	15
16	13	10	7
1	8	11	14

 II.

3	5	C	7
A	10	2	14
12	B	16	11
13	15	8	D

$$A + B + C + D = ?$$

- A) 20 B) 24 C) 32 D) 35 E) 44

Aşağıdaki dizilerin hatalı terimini bulunuz (1 - 6)

Find the incorrect term of each sequence below (1 - 6)

1. 3, 15, 27, 48, 76, 99

A) 15 B) 27 C) 48 D) 76 E) 99

2. 1, 2, 4, 8, 10, 16

A) 2 B) 4 C) 8 D) 10 E) 16

3. 5, 9, 18, 43, 92, 173

A) 9 B) 18 C) 43 D) 92 E) 173

4. 9, 16, 25, 48, 66

A) 9 B) 16 C) 25 D) 48 E) 66

5. 10, 16, 54, 128, 250

A) 10 B) 16 C) 54 D) 128 E) 250

6. 72, 49, 36, 18, 8

A) 72 B) 49 C) 36 D) 18 E) 8

Aşağıdaki dizilerin hatalı terimi yerine gelecek doğru sayıyı bulunuz (7 - 12)

Determine the correct replacement of the incorrect term for each sequence below (7 - 12)

7. 1, -2, 2, 4, -8, -32

A) -1 B) -2 C) 3 D) 4 E) 8

8. 72, 56, 32, 18, 8, 2

A) 50 B) 33 C) 20 D) 12 E) 4

9. 108, 60, 36, 30, 28, 27

A) 180 B) 120 C) 40 D) 24 E) 20

10. $\frac{19}{24}, \frac{23}{33}, \frac{27}{39}, \frac{31}{51}, \frac{37}{62}$

A) $\frac{27}{40}$ B) $\frac{29}{44}$ C) $\frac{29}{47}$ D) $\frac{33}{45}$ E) $\frac{33}{49}$

11. (3,1) : (6,3) : (9,7) : (15,9) : (24,12)

A) (4,11) B) (9,6) C) (15,10)
D) (21,9) E) (24,14)

12. (5,25) : (6,36) : (8,56) : (9,81) : (11,99)

A) (7,70) B) (8,80) C) (9,72)
D) (10,110) E) (11,121)

Aşağıdaki dizilerden hatalı olanı bulunuz (13 – 16)

Determine the incorrect sequence for each question (13 – 16)

13. A) 2, 5, 11, 23, 47
 B) 1, 7, 8, 15, 23
 C) 8, 9, 11, 15, 23
 D) 9, 16, 25, 36, 64
 E) 2, 6, 18, 54, 162

14. A) 137, 118, 81, 62, 25
 B) 134, 66, 21, 6, 1
 C) 128, 64, 32, 16, 8
 D) 127, 126, 122, 113, 97
 E) 125, 64, 27, 8, 1

15. A) 3, 2, 6, 12, 72
 B) 4, 8, 16, 23, 28
 C) 2, 8, 18, 32, 50
 D) 3, 13, 32, 33, 52
 E) 11, 14, 19, 24, 55

16. A) 77, 49, 36, 24, 8
 B) 81, 54, 36, 24, 16
 C) 44, 52, 59, 73, 83
 D) 90, 81, 65, 61, 37
 E) 26, 34, 38, 46, 58

Aşağıdaki dizilerden hangileri hatalıdır. (17 – 20) ?

Which ones of following sequences are incorrect (17 – 20) ?

17. I. 3, 6, 9, 15, 24
 II. 2, 3, 5, 8, 13
 III. 4, 1, 4, 4, 16
 IV. 2, 3, 6, 18, 96
 A) I
 B) II, III
 C) III
 D) II, IV
 E) IV

18. I. 11, 13, 17, 19, 23
 II. 4, 6, 10, 14, 22
 III. 32, 24, 20, 17, 15
 IV. 121, 49, 25, 9, 4
 A) I
 B) II, III
 C) III
 D) IV
 E) I, IV

19. I. 2, 12, 40, 50, 51
 II. 19, 34, 29, 46, 65
 III. 17, 27, 48, 56, 79
 IV. 98, 72, 14, 4, 4
 A) I, II
 B) II
 C) II, III
 D) III, IV
 E) IV

20. I. 52, 63, 94, 46, 18
 II. 36, 72, 97, 113, 122
 III. 5, 25, 49, 169, 196
 IV. 36, 45, 41, 17, 50
 A) II
 B) I, IV
 C) III
 D) III, IV
 E) IV

1. 5929457592945759.....

dizisinde baştan 54. sayı aşağıdakilerden hangisidir?

What is the 54th number in the given sequence?

A) 2 B) 4 C) 5 D) 7 E) 9

2. $\Sigma\&\%f!\#\Sigma\&\%f!\#\Sigma\&...$

baştan 144. sembol aşağıdakilerden hangisidir?

What is the 144th symbol?

A) f B) & C) Σ D) % E) #

3.

1.	K	E	M	A	N
2.	N	K	E	M	A
3.	A	N	K	E	M
4.	M	A	N	K	E
2022.	?	?	?	?	?

A)

N	K	E	M	A
---	---	---	---	---

B)

A	N	K	E	M
---	---	---	---	---

C)

M	A	N	K	E
---	---	---	---	---

D)

E	M	A	N	K
---	---	---	---	---

E)

K	E	M	A	N
---	---	---	---	---

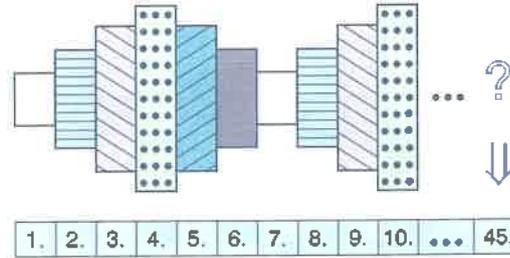
4. GALATAYÖSGALATAYÖSG....

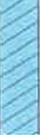
baştan 100. harf aşağıdakilerden hangisidir?

What is the 100th letter?

A) Y B) S C) A D) G E) L

5.

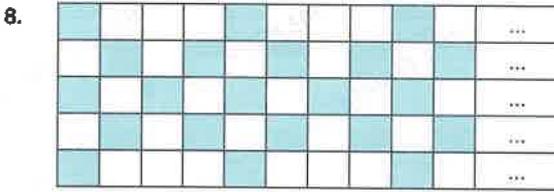
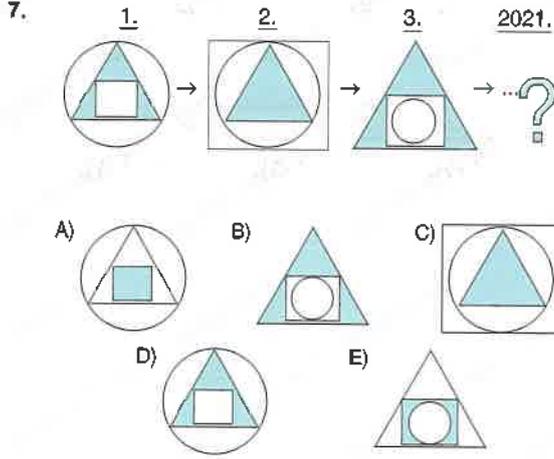


A)  B)  C)  D)  E) 

6.

1	YOS	EXAM
2	OSY	XEAM
3	SYO	XAEM
:
?	SYO	XEAM

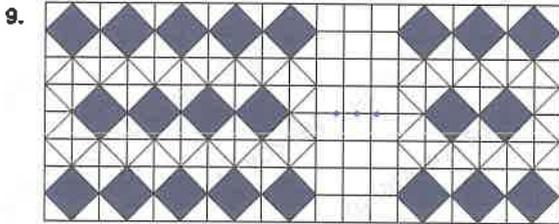
A) 110 B) 120 C) 130
D) 140 E) 150



Şekilde toplam 250 tane birim kare vardır. Buna göre, kaç tane siyah birim kare vardır?

There are a total of 250 unit squares in the figure. How many black unit squares are there?

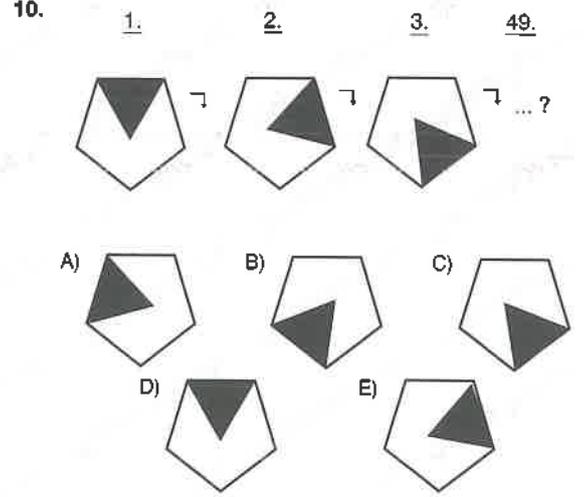
- A) 100 B) 101 C) 102 D) 103 E) 104



Şekilde 98 beyaz eşkenar dörtgen olduğuna göre, kaç lacivert eşkenar dörtgen vardır?

If there are 98 white rhombuses, how many navy ones are there?

- A) 70 B) 72 C) 74 D) 76 E) 78



11.

1	5	8	12
2	6	9	13
3	7	10	14
4		11	

 ...

↓ ↓ ↓ ↓
1. 2. 3. 4.
sütun sütun sütun sütun
row1 row2 row3 row4

40 sayısı hangi sütunda yer alır?

Which row is 40 located in?

- A) 9 B) 10 C) 11 D) 12 E) 13

12.

1.	1	2	3	4
2.	p	q	r	s
3.	8	7	6	5
4.	s	r	q	p
5.	9	10	11	12
75.	?	?	?	?

- A)

145	146	147	148
-----	-----	-----	-----

B)

p	q	r	s
---	---	---	---

C)

148	147	146	145
-----	-----	-----	-----

D)

s	r	q	p
---	---	---	---

E)

152	151	150	149
-----	-----	-----	-----

1. A sequence of numbers arranged in two rows. The first row contains 14, 20, 18, and a question mark. The second row contains 10, 18, 28, and 38. The numbers are connected by lines: 10-14, 14-18, 18-20, 20-28, 28-38, 18-20, 20-18, 18-?.

A) 44 B) 48 C) 50 D) 58 E) 66

2. A sequence of four circles. Each circle is divided horizontally. The top half contains a number and the bottom half contains another number. The pairs are (72, 2), (? , 4), (24, 12), and (54, 18).

A) 9 B) 12 C) 16 D) 18 E) 20

3. A sequence of four triangles pointing downwards. Each triangle is divided into two parts. The top part contains a number and the bottom part contains another number. The pairs are (4, 32), (108, 256), and (? , ?).

A) 288 B) 306 C) 348 D) 476 E) 500

4. A sequence of four triangles pointing downwards. Each triangle is divided into two parts. The top part contains a number and the bottom part contains another number. The pairs are (2, 3), (10, 4), (22, 8), and (26, ?).

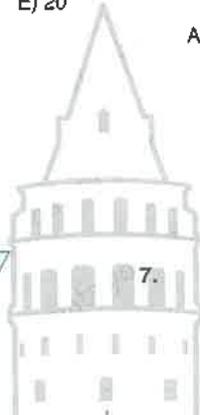
A) 3 B) 4 C) 6 D) 8 E) 12

5. A sequence of numbers arranged in two rows. The first row contains 6, 4, and 2. The second row contains 1, 2, a question mark, and 8. Lines connect 6-4, 4-2, 1-2, 2-?, and ?-8.

A) 10 B) 16 C) 24 D) 30 E) 36

6. A sequence of two semi-circles. The first semi-circle is divided into three segments with numbers 16, 24, and 36. The second semi-circle is divided into three segments with numbers ?, 81, and an unlabeled segment.

A) 48 B) 54 C) 60 D) 66 E) 72

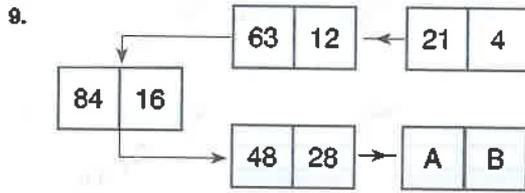


7. A sequence of numbers arranged in two rows. The first row contains -2, 4, and 6. The second row contains a question mark, -4, and 2. Lines connect -2-4, 4-6, ?-4, and 4-2.

A) -12 B) -8 C) -6 D) 4 E) 8

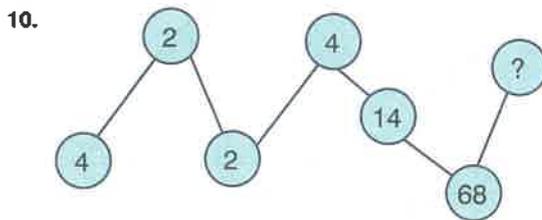
8. A sequence of numbers arranged in two rows. The first row contains 5, 8, and 9. The second row contains a question mark, -18, and 3. Lines connect 5-8, 8-9, ?-18, and 8-3.

A) -27 B) -39 C) -42 D) -54 E) -63



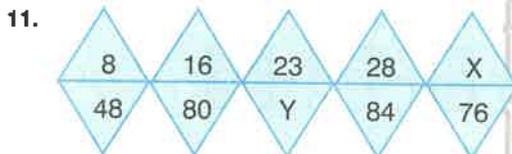
$A + B = ?$

- A) 255 B) 250 C) 275 D) 300 E) 325



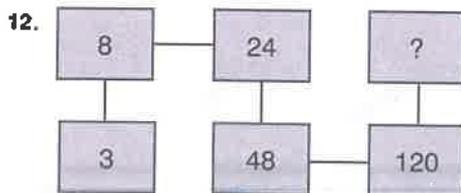
?

- A) 406 B) 414 C) 422 D) 430 E) 438

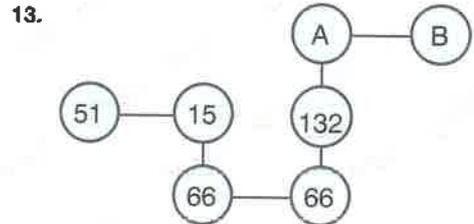


$X + Y = ?$

- A) 120 B) 130 C) 140 D) 150 E) 160

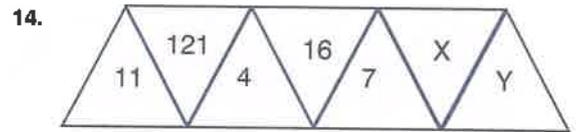


- A) 145 B) 168 C) 199 D) 212 E) 288



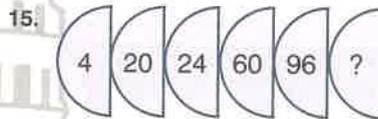
$A + B = ?$

- A) 582 B) 585 C) 588 D) 591 E) 594

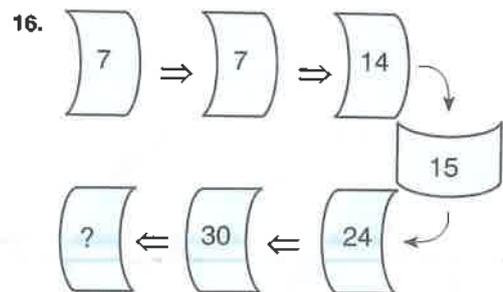


$X + Y = ?$

- A) 50 B) 54 C) 58 D) 62 E) 66



- A) 249 B) 288 C) 321 D) 356 E) 412



- A) 18 B) 20 C) 32 D) 48 E) 54

1. 18, 27, 38, 51, 66, ?

- A) 69 B) 75 C) 79 D) 83 E) 91

2. $\frac{5}{2}, \frac{7}{3}, \frac{10}{4}, \frac{14}{6}, \frac{20}{8}, ?$

- A)
- $\frac{24}{14}$
- B)
- $\frac{26}{16}$
- C)
- $\frac{28}{12}$
-
- D)
- $\frac{30}{18}$
- E)
- $\frac{32}{20}$

3. 343, 333, 324, 315, ?

- A) 310 B) 308 C) 306 D) 304 E) 302

4. (28,44) : (36, 54) : (42, 50) : ?

- A) 44,52 B) 44,60 C) 46,55 D) 48,58 E) 48,62

5.



- A) 5 B) 6 C) 7 D) 8 E) 9

6. 14, 49, 916, 1625, ?

- A) 2432 B) 2533 C) 2536 D) 2838 E) 2840

7. 10, 45 ; 11,15 ; 11,85 ; ?

- A) 12,45 B) 12,55 C) 12,65 D) 12,75 E) 12,85

8. $\begin{matrix} 16 & (47) & 49 \\ 28 & (75) & 35 \\ 96 & (?) & 56 \end{matrix}$

- A) 125 B) 196 C) 216 D) 248 E) 272

9. ${}^4\sqrt{2}, \sqrt{8}, 16, KLM$

$\Rightarrow K + L + M = ?$

- A) 4 B) 5 C) 7 D) 8 E) 9

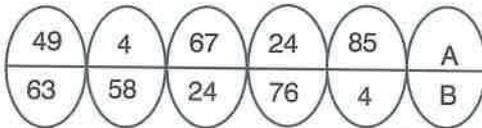
10. $-5, 2, 21, 58, ?$

- A) 81 B) 88 C) 97 D) 119 E) 134

11. $-3, 1, -3, -3, 9, -27, ?$

- A) -243 B) -81 C) 27 D) 81

12.



$\Rightarrow A + B = ?$

- A) 115 B) 129 C) 136 D) 148 E) 157

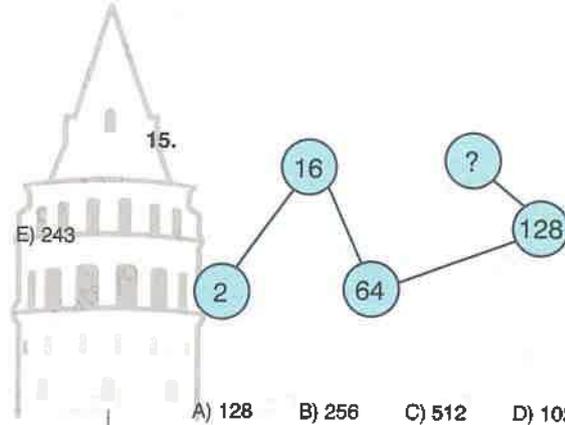
13. $14, 19, 28, 55, 94, ?$

- A) 58 B) 64 C) 77 D) 85 E) 92

14. $100, 121, 225, 268, ?$

- A) 957 B) 969 C) 976 D) 988 E) 999

15.



- A) 128 B) 256 C) 512 D) 1024 E) 2048

16. $18, 27, 34, 59, 61, 82, ?$

- A) 64 B) 73 C) 82 D) 91 E) 95

1. 27, 53, 34, 25, 29, ?

- A) 57 B) 64 C) 72 D) 85 E) 94

2. 81, 73, 70, 63, 60, ?

- A) 48 B) 51 C) 54 D) 57 E) 59

3. $3 \leftrightarrow 9$
 $5 \leftrightarrow 52$
 $8 \leftrightarrow 46$
 $13 \leftrightarrow 961$
 $20 \leftrightarrow ?$

- A) 4 B) 691 C) 28 D) 576 E) 441

4. $1\frac{5}{4}, 2\frac{1}{5}, 1\frac{8}{7}, 2\frac{1}{10}, ?$

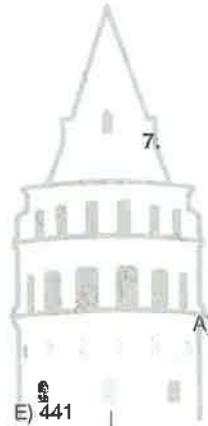
- A) $1\frac{10}{12}$ B) $2\frac{14}{13}$ C) $1\frac{15}{13}$
 D) $1\frac{13}{14}$ E) $2\frac{1}{14}$

5. -34, 56, 78, 910, ?

- A) 1012 B) 1014 C) 1112 D) 1116 E) 1218

6. 7, 11, 20, 36, 61, ?

- A) 95 B) 97 C) 99 D) 101 E) 103



7. $24 \rightarrow 53 \rightarrow 51$
 $33 \rightarrow 69 \rightarrow 63$
 $45 \rightarrow 28 \rightarrow ?$

- A) 66 B) 78 C) 84 D) 92 E) 95

8. 4, 7, 9, 10, 1, ?

- A) 9 B) 10 C) 11 D) 12 E) 13

9. 3, 9, 36, 180, ?

- A) 720 B) 960 C) 1080 D) 1280 E) 1440

10. 7, 8, 10, 16, 40, ?

- A) 90 B) 120 C) 148 D) 160 E) 172

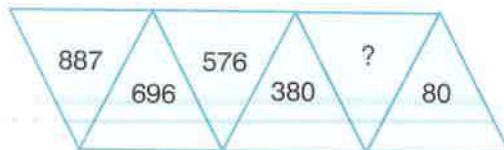
11.

A	45	39	33	27	21
15	21	18	15	B	

⇒ A + B = ?

- A) 52 B) 63 C) 74 D) 85

12.



- A) 320 B) 280 C) 240 D) 184 E) 164

13. 41, 43, 47, 53, 59, ?

- A) 61 B) 63 C) 65 D) 66 E) 68

14. 15, 34, 53, 72, 91, ?

- A) 29 B) 97 C) 99 D) 121 E) 144

15. $\frac{19}{28}, \frac{24}{36}, \frac{33}{44}, \frac{41}{94}, ?$

A) $\frac{57}{72}$

B) $\frac{61}{38}$

C) $\frac{63}{92}$

D) $\frac{72}{29}$

E) $\frac{84}{91}$

16. 1, 2, 5, 16, 65, ?

- A) 186 B) 244 C) 326 D) 418 E) 502

1. 21, 22, 26, 35, 51, ?

- A) 54 B) 68 C) 72 D) 76 E) 80

2.

1	7	9	21	81	X
3	3	13	27	31	Y

$\Rightarrow Y - X = ?$

- A) 200 B) 201 C) 203 D) 206 E) 209

3. $\sqrt{2}, 5, 3, 9, 10, 17, Y, X$

$Y - X = ?$

- A) 68 B) 69 C) 70 D) 71 E) 75

4. 18, 20, 24, 30, 38, ?

- A) 44 B) 46 C) 48 D) 50 E) 56

5. $\frac{8}{67}, \frac{11}{64}, \frac{16}{59}, \frac{23}{52}, ?$

- A)
- $\frac{34}{41}$
- B)
- $\frac{34}{43}$
- C)
- $\frac{41}{43}$
- D)
- $\frac{38}{41}$
- E)
- $\frac{33}{43}$

6. 14, 16, 12, 52, 28, 36, 53, 94 ?, ?

- A) 24,46 B) 43,64 C) 42,64
-
- D) 81,100 E) 42,81

7.

2	12	14	34	?
92	7	14	30	?

- A)
- | |
|----|
| 56 |
| 10 |
- B)
- | |
|----|
| 65 |
| 10 |
- C)
- | |
|----|
| 63 |
| 20 |

- D)
- | |
|----|
| 56 |
| 21 |
- E)
- | |
|----|
| 65 |
| 11 |

8. $\frac{3}{7}, \frac{7}{11}, \frac{11}{19}, \frac{16}{22}, \frac{23}{27}, \frac{27}{31}, \frac{31}{A}, \frac{B}{42}$

$A = ? B = ?$

- A) 33,36 B) 34,37 C) 37,37 D) 39,36 E) 39,39

9. 14, 36, 58, 710, 912, ?

- A) 1009 B) 1114 C) 1134 D) 1213 E) 1164

10. (3,45) ↔ (5,75) ↔ (7, 105) ↔ ?

- A) (9,130) B) (11,135) C) (9,137)
D) (9,135) E) (11,130)

11.  3, 45, 51, 213, 72, 425, ?, 517

- A) 49 B) 64 C) 81 D) 100

12. $\frac{9}{15}, \frac{12}{18}, \frac{30}{36}, \frac{X}{Y}$

$Y - X = ?$

- A) 2 B) 3 C) 6 D) 8 E) 9

13. 92, 108, 27, 36, 12, 16, ?

- A) 2 B) 4 C) 6 D) 8 E) 10

14. $\frac{2}{4}, \frac{8}{11}, \frac{33}{A}, \frac{B}{153}$

$B - A = ?$

- A) 111 B) 101 C) 91 D) 81 E) 71

15. 961, 121, 18, 94, 52, ?

- A) 6 B) 7 C) 8 D) 9 E) 10

16.

11	14	18	25	?
14	22	31	39	?

- A)

27
72

 B)

28
48

 C)

32
36
- D)

33
48

 E)

36
55

1. 1, 2, 3, 5, 8, 13, 21 ?

- A) 30 B) 32 C) 34 D) 36 E) 38

2. I. 4, 1, 3, 6
 II. 9, 4, 20, 25
 III. 8, 1, 7, 14
 IV. ?, ?, ?, ?

- A) 13, 4, 36, 37
 B) 13, 6, 32, 41
 C) 11, 2, 18, 29
 D) 11, 2, 18, 27
 E) 15, 2, 25, 27

3. Hatalı diziyi bulunuz.

Find the incorrect sequence.

- A) 1, 24, 35, 78, 69
 B) 28, 13, 54, 76, 9
 C) 32, 47, 61, 59, 8
 D) 21, 34, 56, 7, 89
 E) 98, 77, 24, 5, 36

4.

2	4	6	8	168
13	19	25	31	?

- A) 505 B) 511 C) 517
 D) 523 E) 529

5. Dizinin hatalı terimini bulunuz.

Find the incorrect term of the sequence.

4 8 3 10 14 9 16 21 15 22

- A) 10 B) 14 C) 16 D) 21 E) 22

6. 1, 2, 2, 3, 4, 5, 7, 9, ?, ?

- A) 11,17 B) 11,15 C) 9,17
 D) 10,16 E) 10,17

7. 0
 1 1
 2 3 5
 3 5 9 17
 4 Z 13 T 49 } ⇒ Z + T = ?

- A) 32 B) 33 C) 34 D) 35 E) 36

8.

1	2	3	4	80
8	13	11	16	?

- A) 125 B) 127 C) 129
 D) 130 E) 132

9.

I.	2	4	7	14	17	34
II.	3	9	13	39	43	129
III.	106	102	34	30	10	6
IV.	?	?	?	?	?	?

- A) 234, 232, 58, 56, 14, 12
 B) 45, 42, 21, 18, 9, 6
 C) 12, 24, 25, 50, 51, 102
 D) 137, 132, 33, 28, 8, 3
 E) 14, 16, 32, 34, 68, 70

10. 2, -1, -2, 2, -4, ?

- A) 4 B) 8 C) 4 D) -8 E) 16

11. I. 10 20 ? 80 160
 II. ? 13 10 5 2 1

- A) 40,30 B) 30,20 C) 40,26
 D) 30,20 E) 17,34

12. 34, 36, 32, 64, 16, 18, 14, 28, 7, ?

- A) 3 B) 6 C) 9 D) 12 E) 15

13. 0, 1, 5, 29, 209, ?

- A) 1889 B) 1881 C) 1873 D) 1865 E) 1851

14. I. II. III. IV. V.
 1 0 6 5 11
 2 0 12 10 22
 4 0 144 100 ?
 5 1 145 101 ?

- A) 444 B) 486 C) 484
 445 484 485
 D) 404 E) 444
 405 440

15. 1, 8, 27, 64, 125, ?

- A) 185 B) 216 C) 251 D) 256 E) 318

16. Hatalı terimin yerine gelecek sayıyı bulunuz.

Determine the correct replacement of the incorrect term.

13, 62, 36, 74, 65, 87

- A) 25 B) 30 C) 35 D) 40 E) 45

1. 107, 100, 91, 80, 63, 56, 47 ?

- A) 32 B) 36 C) 40 D) 44 E) 47

2. 116, 113, 109, 104, 97, 73 ?

- A) 43 B) 46 C) 48 D) 50 E) 51

3. 6, 7, 12, 77, 24, 847, ?

- A) 48 B) 46 C) 60 D) 64

4. 1, 2, 3, 5, 11, 35, ?

- A) 105 B) 125 C) 140 D) 155 E) 160

5. 3, 1, 4, 4, 6, 10, 10, 22, ? ?

- A) 18,40 B) 18,46 C) 14,40
D) 14,46 E) 16,44

6. 12, 42, 54, 57, 78, ?

- A) 83 B) 87 C) 89 D) 98 E) 99

7. 1, 3, 12, 45, ?

- A) 135 B) 151 C) 155 D) 171 E) 180

8. I. 3, 6, 12, 24, 48, 96

II. 97, 49, ?, 13, 7, 4

- A) 13 B) 25 C) 49 D) 98 E) 108

9.

A	B	C
3	7	10
6	16	22
9	25	34
12	34	46
.	.	.
.	.	.
.	.	.
.	.	.

$$B = 70 \Rightarrow A + C = ?$$

- A) 120 B) 118 C) 116 D) 114 E) 112

10.

I.	2	4	6	12	14
II.	5	15	18	54	57
III.	1	5	10	50	55
IV.	?	?	?	?	?

- A) 2, 10, 15, 75, 80
 B) 3, 18, 12, 72, 66
 C) 3, 18, 24, 142, 150
 D) 2, 14, 21, 147, 154
 E) 2, 8, 4, 16, 28

11. I. 27, 60, 44, 87
 II. 63, 96, 80, ?

- A) 119 B) 120 C) 122 D) 123 E) 124

12. $\frac{1}{3}, \frac{2}{8}, \frac{5}{23}, \frac{14}{?}, \frac{41}{203}$

- A) 46 D) 48 C) 56 D) 58 E) 68

13. 8, 22, 8, 28, 8, ?

- A) 10 B) 29 C) 32 D) 34 E) 36

14. 80, 10, 73, 15, 66, ?

- A) 20 B) 25 C) 30 D) 35 E) 38

15. 3, 4, 7, 8, 11, 12, ?

- A) 6 B) 7 C) 10 D) 14 E) 15

16. 14, 28, 16, 32, 6, ?, ?

- A) 14,2 B) 12,2 C) 12,3
 D) 12,4 E) 14,4

1. 3, 5, 7, 9, 11, ?

- A) 12 B) 13 C) 14 D) 15 E) 16

2. 5, 7, 10, 12, 15, ?

- A) 11 B) 13 C) 15 D) 17 E) 19

3. $\frac{61}{8}, \frac{57}{22}, \frac{50}{12}, \frac{16}{61}, \frac{22}{43}, \frac{20}{36}, \frac{61}{?}$

- A) 24 B) 26 C) 28 D) 30

4.

3	7	15	31	63
32	16	8	4	2
160	68	32	14	5
?	?	?	?	?

- A) 1,7,22,50,106 B) 3,6,10,24,48
 C) 1,4,10,22,46 D) 7,15,25,49,97
 E) 1,5,13,29,60

5. -2, 2, 4, 6, 10, ?

- A) 12 B) 14 C) 16 D) 18 E) 20

6. I. 2 6 24
 II. 3 8 33
 III. 5 8 39
 IV. 7 9 ?

- A) 43 B) 45 C) 48 D) 51 E) 52

7. 1, 2, 4, 7, 12, ?

- A) 22 B) 20 C) 18 D) 16 E) 14

8. 107, 291, 475, 659, 843, ?

- A) 1027 B) 1020 C) 1013 D) 1006 E) 999

9.

87	73	93	63	A	93	43
70	71	76	B	81	86	70

B - A = ?

- A) 11 B) 13 C) 17 D) 19 E) 23

10. $\frac{1}{103}, \frac{2}{103}, \frac{3}{206}, \frac{5}{309}, \frac{8}{515}, ?$

- A) $\frac{20}{824}$ B) $\frac{17}{842}$ C) $\frac{16}{842}$
 D) $\frac{15}{824}$ E) $\frac{13}{824}$

11. 237, 311, 386, 462, 539, ?

- A) 611 B) 613 C) 615 D) 617

12.

18	21	25	18	29	33	18	?
28	25	5	21	18	5	14	?

- A)

36
18

 B)

37
11

 C)

36
10

 D)

37
10

 E)

36
11

13. I. 2, 3, 5, 8, 13, ?

II. 1, 24, 47, 93, 162, ?

- A) 20,276 B) 21,277 C) 22,277
 D) 23,278 E) 21,278

14. I. 75, 65, 85, 55, 45, 85, 35, X

II. 1, Y, 7, 20, 13, 30, 19, 40

III. 10, 20, 25, Z, 40, 50, 55, 65

$\Rightarrow Z - (X - Y) = ?$

- A) 0 B) 5 C) 10 D) 15 E) 20

15. 128, 254, 381, 507, 634, ?

- A) 707 B) 734 C) 760 D) 781 E) 807

16. Hatalı diziyi bulunuz.

Find the incorrect sequence.

I. 1,5 - 2,3 - 3,1 - 3,9 - 4,7

II. 5,2 - 4,8, 4,4 - 4 - 3,6

III. $2 - 1 - \frac{1}{2} - \frac{1}{4} - \frac{1}{8}$

IV. 31 - 29 - 24 - 22 - 17 - 12

V. 21 - 9 - 21 - 11 - 21 - 13

- A) I B) II C) III D) IV E) V

1. 8, 21, 34, 47, ?

- A) 57 B) 58 C) 59 D) 60 E) 61

2. 2, 10, 26, 50, ?

- A) 74 B) 76 C) 78 D) 80 E) 82

3. 1, 1, 2, 3, 3, 5, X, Y

 $X + Y = ?$

- A) 11 B) 12 C) 13 D) 14 E) 15

4	3	9	7	1	4	2	5
20	12	27	14	5	K	6	10
10	2	17	4	-5	6	L	0
100	4	289	16	M	36	16	0

4 - 6. soruları tabloya göre cevaplayınız.

Answer questions 4 - 6 according to the table.

4. $K = ?$

- A) 8 B) 9 C) 12 D) 14 E) 16

5. $L = ?$

- A) -6 B) -4 C) 0 D) 4 E) 10

6. $M = ?$

- A) -30 B) -25 C) 0 D) 25 E) 30

7.

25	36	49	?	81
91	80	67	23	?

- A) 64,35 B) 93,35 C) 64,25
-
- D) 64,8 E) 93,8

8. 9, 11, 19, 43, 63, ?

- A) 85 B) 86 C) 87 D) 88 E) 89

9. $\begin{matrix} 7 & (11) & 16 \\ 13 & (?) & 36 \end{matrix}$

- A) 16 B) 17 C) 18 D) 19 E) 20

10. $\begin{matrix} \text{I} & \text{II} & \text{III} & \text{IV} \\ \triangle_{11} & \square_{10} & \hexagon_{8} & ? \end{matrix}$

- A) \circ_5 B) \pentagon_6 C) \heptagon_5
 D) \octagon_7 E) \triangle_{10}

11. $\begin{matrix} 43 & 6 \\ 27 & 7 \\ 18 & 4 \\ 62 & ? \end{matrix}$

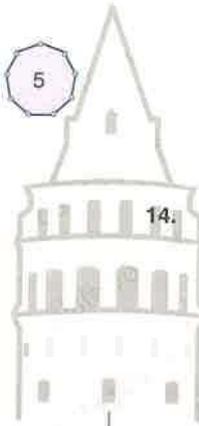
- A) 3 B) 5 C) 6 D) 7 E) 8

12. $\begin{matrix} 7 & 4 & 8 & 2 & \rightarrow & 11,6 \\ 3 & 1 & 9 & 3 & \rightarrow & 4,6 \\ 4 & 5 & 12 & 7 & \rightarrow & ? \end{matrix}$

- A) 8,9 B) 1,5 C) 7,5 D) 1,9 E) 9,5

13. 17, 14, 28, ?, 50, 47

- A) 24 B) 25 C) 56 D) 53 E) 100



14. $\begin{matrix} \text{I.} & 7 & 14 & 28 & 31 \\ \text{II.} & 3 & 10 & 20 & 23 \\ \text{III.} & 5 & 11 & 33 & 37 \\ \text{IV.} & ? & ? & 39 & 43 \end{matrix}$

- A) 7,13 B) 6,13 C) 6,12 D) 5,12 E) 7,12

15. $\begin{matrix} \text{I.} & 63 & 11 & 37 \\ \text{II.} & 46 & 18 & 32 \\ \text{III.} & ? & 47 & 33 \end{matrix}$

- A) 9 B) 14 C) 15 D) 19 E) 29

1. 6, 8, 11, ?, 20, 26

- A) 13 B) 14 C) 15 D) 16 E) 17

2.

25	64	81	16
5	8	7	?

- A) 3 B) 4 C) 5 D) 6 E) 7

3.

7	→	51
6	→	44

- A) 2 → 6 B) 4 → 17 C) 5 → 32
-
- D) 3 → 21 E) 9 → 65

4. 0, 1, 2, 3, 6, 11, 20, ?

- A) 31 B) 33 C) 35 D) 37 E) 39

5. 3, 1, 2, 4, 2, 3, 9, ?

- A) 6 B) 7 C) 8 D) 9 E) 10

6.

I.	36	42	26
II.	48	64	42
III.	21	34	?

- A) 9 B) 13 C) 15 D) 17 E) 23

7. 79, 73, 66, ?, 49, 39

- A) 58 B) 57 C) 56 D) 55 E) 54

8. 3, 0, 1, 2, 5, 20, 25, ?

- A) 30 B) 31 C) 50 D) 75 E) 150

9. $3, \frac{4}{4}, \frac{7}{10}, \frac{12}{19}, \frac{X}{Y}$

$X + Y = ?$

- A) 40 B) 43 C) 45 D) 47 E) 50

10. $\begin{matrix} 12 & 5 \\ 31 & 10 \\ 43 & 25 \\ 54 & ? \end{matrix}$

- A) 18 B) 27 C) 36 D) 41 E) 45

11. $3a, 7b, 13c, 21d, ?$

- A) 30e B) 30f C) 31f D) 32e E) 31e

12. $\begin{matrix} 4 & 8 & 32 & 256 \\ 3 & 9 & 27 & 243 \\ 1 & 5 & 5 & 25 \\ 2 & ? & ? & 18 \end{matrix}$

- A) 3-6 B) 4-8 C) 4-6 D) 6-3 E) 2-9

13. $11, 9, 13, 12, 15, 15, x, y$

$x - y = ?$

- A) -2 B) -1 C) 0 D) 1 E) 2

14. $7, 10, 8, ?, 27, 24, 72$

- A) 16 B) 18 C) 20 D) 24 E) 25

15. $5, 6, 7, 6, 10, 12, 15, 12, 23, 24, ?$

- A) 33 B) 35 C) 36 D) 37 E) 39

16. $7, 15, 31, 63, ?$

- A) 124 B) 125 C) 126 D) 127 E) 128



1. 8, 15, 29, 57, ?

- A) 111 B) 113 C) 115 D) 117 E) 119

9	25	33	0	K	21
11	27	35	-5	9	16
7	23	31	-3	11	L

2 - 3. sorular tabloya göre cevaplayınız.

Answer questions 2 - 3 according to the table.

2. K = ?

- A) 7 B) 10 C) 12 D) 13 E) 14

3. L = ?

- A) 10 B) 14 C) 18 D) 20 E) 24

4. 7, ?, 19, 28, 39

- A) 10 B) 11 C) 12 D) 13 E) 14

5. $\begin{matrix} -73 & 40 \\ 28 & 60 \\ 94 & 65 \\ 16 & ? \end{matrix}$

- A) 28 B) 35 C) 36 D) 42 E) 45

6. $\frac{5}{3}, \frac{7}{4}, 2, \frac{14}{6}, \frac{X}{Y}$,

X + Y = ?

- A) 26 B) 27 C) 28 D) 29 E) 30

7. 2, 3, 5, 7, 8, 12, 11, 18, X, Y

X + Y = ?

- A) 35 B) 36 C) 37 D) 38 E) 39

8. $\begin{matrix} 73 & (158) & 86 \\ 80 & (105) & 45 \\ 91 & ? & 52 \end{matrix}$

- A) 111 B) 115 C) 119 D) 121 E) 123

9.

256	128	48	X
243	117	39	Y

X, Y = ?

- A) 24,12 B) 24,19 C) 52,45
D) 64,56 E) 64,55

10.

17	30	?	48	42
13	15	?	24	38

- A) 40,18 B) 35,18 C) 45,19
D) 40,19 E) 36,32

11. 57, 54, ?, 33, 30, 15, 21

- A) 27 B) 28 C) 29 D) 30

12.

I.	7	14	34	20
II.	4	8	19	11
III.	5	9	29	38
IV.	6	11	X	Y

X + Y = ?

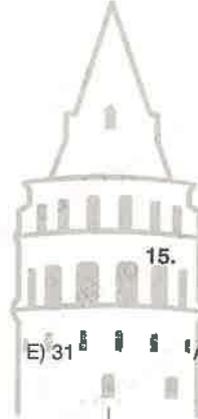
- A) 73 B) 75 C) 79 D) 81 E) 83

13. 8 5 3 → 1,6
7 8 0 → 1,5
9 6 ? → 1,8

- A) 1 B) 2 C) 3 D) 4 E) 5

14. 385, 286, 219, 164, ?

- A) 111 B) 120 C) 121 D) 124 E) 131



15. 126, 120, 62, 79, 30, 38, ?

- A) 15 B) 14 C) 13 D) 12 E) 11

16. 731, 245, 83, ?

- A) 25 B) 26 C) 27 D) 28 E) 29

1. 37, 39, 42, 47, 52, 63, ?

- A) 72 B) 73 C) 74 D) 75 E) 76

3	5	11	21	35
9	10	?	33	55

- A) 20 B) 19 C) 18 D) 17 E) 16

72	24	67	X	398
9	6	13	Y	20

X, Y = ?

- A) 64, 8 B) 139, 11 C) 127, 13
-
- D) 96, 16 E) 102, 3

4 - 6 Aşağıdaki serilerden hangisi hatalıdır?

Which of followings series (4 - 6) is false?

4. A) 3, 10, 17, 24, 31, 38
B) 47, 45, 39, 37, 31, 29
C) 18, 36, 39, 78, 81, 162
D) 13, 20, 40, 48, 96, 103
E) 87, 76, 79, 68, 71, 60

5. A) 26, 40, 55, 71, 88, 106
B) 79, 74, 68, 61, 53, 44
C) 3, 6, 12, 24, 48, 96
D) 102, 51, 52, 26, 27, 13
E) 9, 27, 81, 243, 729, 2187

6. A) 340, 68, 65, 13, 10, 2
B) 5, 7, 11, 13, 17, 19
C) 7, 9, 18, 20, 40, 42
D) 5, 15, 11, 33, 29, 87
E) 28, 35, 42, 48, 56, 63

7. 2, 3, 10, 29, 66, ?

- A) 121 B) 123 C) 125 D) 127 E) 129

8. 128, 123, 111, 92, 66, ?

- A) 30 B) 31 C) 32 D) 33 E) 34

9. 8, 13, 17, 25, 35, 49, 71, 77, x, y
 $x + y = ?$
 A) 295 B) 296 C) 297 D) 298 E) 299

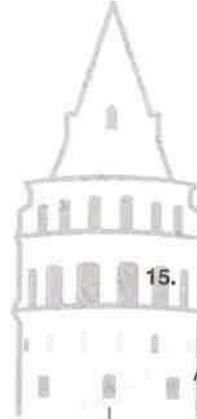
10. $\frac{3}{2}, \frac{5}{7}, \frac{11}{16}, \frac{21}{29}, \frac{x}{y}$
 $y - x = ?$
 A) 11 B) 12 C) 13 D) 14 E) 15

11. $\begin{matrix} 71 & 25 \\ 45 & 28 \\ 13 & 13 \\ 26 & ? \end{matrix}$
 A) 25 B) 23 C) 22 D) 27 E) 31

12. 12, 13, 26, ?, 24, 48, 45, 46
 A) 22 B) 23 C) 25 D) 27 E) 31

13. $\begin{matrix} \text{I.} & 17 & 18 & 53 & 52 \\ \text{II.} & 9 & 12 & 33 & 28 \\ \text{III.} & 8 & 14 & x & y \end{matrix}$
 $x + y = ?$
 A) 51 B) 54 C) 57 D) 59 E) 61

14. $\begin{matrix} 83 & (52) & 47 \\ 92 & (48) & 56 \\ 87 & ? & 23 \end{matrix}$
 A) 40 B) 42 C) 57 D) 55 E) 62



15. 48, 80, 64, 52, 29, ?
 A) 11 B) 17 C) 23 D) 38 E) 85

16. 132, 125, 110, 87, ?
 A) 57 B) 56 C) 55 D) 54 E) 53

1. $3a \bullet 2b = a + b$

$a \blacktriangle b = a^b$

$(18 \bullet 6) \blacktriangle 2 = ?$

- A) 16 B) 25 C) 49 D) 64 E) 81

2. $a^3 \bullet b^2 = 2ab + b$

$64 \blacktriangle 81 = ?$

- A) 81 B) 72 C) 63 D) 45 E) 27

3. $2a \bullet 3b = a + b$

$a \blacktriangle b = a^b$

$(4 \blacktriangle 3) \bullet 27 = ?$

- A) 39 B) 40 C) 41 D) 42 E) 43

4. $a \blacksquare b = a + ab - b^2$

$a \bullet b = a^b - b^a$

$(5 \blacksquare 3) \bullet 1 = ?$

- A) 4 B) 6 C) 8 D) 10 E) 12

5. $x \blacksquare y = 4y - \frac{x}{3} + 4$

$18 \blacksquare 17 = ?$

- A) 55 B) 66 C) 68 D) 77 E) 80

6. $w \odot t = w^3 + 3w^2t + 3wt^2 + t^3$

$5 \odot 6 = ?$

- A) 1300 B) 1330 C) 1331
-
- D) 1400 E) 2000

7. $a \blacktriangle = a^2 - 5$

$b \blacksquare = 3b + 2$

$(5 \blacktriangle) \blacksquare = ?$

- A) 40 B) 46 C) 48 D) 60 E) 62

8. $m \blacktriangle n = \frac{3n}{2m}$

$m \odot n = \frac{2m+n}{m+2n}$

$9 \odot (6 \blacktriangle - 8) = ?$

- A) 16 B)
- $\frac{16}{5}$
- C)
- $\frac{1}{5}$
- D) 20 E) 22

9. $x \blacktriangle y = \sqrt{xy} \cdot y$

$$x \bullet y = \frac{5x-3y}{6}$$

$$(3 \bullet 3) \blacktriangle (6 \bullet 8) = ?$$

- A) 0 B) 1 C) 2 D) 3 E) 4

10. $a \bullet b = \frac{ab}{4a}$

$$a \blacksquare b = \sqrt[a]{b}$$

$$8 \bullet (5 \blacksquare 32) = ?$$

- A) 10 B) 8 C) 4 D) 2 E) 1

11. $x \blacksquare y = \sqrt[3]{x}$

$$x \bullet y = x^y$$

$$(16 \blacksquare 2) \bullet (27 \blacksquare 3) = ?$$

- A) 2 B) 4 C) 8 D) 16 E) 64

12. $x \bullet y = x^2 \blacksquare y^2$

$$x \blacksquare y = \frac{x \cdot y}{2x+9}$$

$$(3 \bullet 5) = ?$$

- A) 1 B) 5 C) $\frac{25}{3}$ D) $\frac{1}{3}$ E) 3

13. $a^{ab} \star (b^a)^2 = b^2 + a^2 + ab$

$$64 \star 81 = ?$$

- A) 9 B) 11 C) 13 D) 17 E) 19

14. $(x+y) \blacktriangle (x^2+y^2) = (x^3+y^3) + 4xy$

$$4 \blacktriangle 13 = ?$$

- A) 60 B) 56 C) 52 D) 48 E) 44

15. $a \bullet b = \max(a, b - 2a)$

$$x \star y = \min\left(\frac{x}{2}, y\right)$$

$$(24 \star 16) \bullet (60 \star 36) = ?$$

- A) 8 B) 10 C) 12 D) 14 E) 16

16. $x \blacktriangledown y = 3x + 2y - 2(y \blacktriangledown x)$

$$2 \blacktriangledown 1 = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

1. $a \odot b = (a \cdot b) \nabla b$

$$a \nabla b = \frac{a+b}{a-b}$$

$8 \odot 3 = ?$

- A) 3 B) 6 C) 9 D)
- $\frac{1}{7}$
- E)
- $\frac{9}{7}$

2. $x \diamond y = x^2 \cdot y^2$

$2001 \diamond 2000 = ?$

- A) 2000 B) 2001 C) 4000 D) 4001 E) 1000

3. $x^3 \blacktriangle y^4 = 3x + 4y$

$64 \blacktriangle 81 = ?$

- A) 20 B) 24 C) 28 D) 30 E) 34

4. $a \nabla b = 3a + 4b$

$a \star b = 5a - 3b$

$(3 \nabla 5) + (2 \nabla 1) - (3 \star 5) = ?$

- A) 39 B) 40 C) 42 D) 44 E) 46

5. $\frac{2a}{5} \cdot \frac{3b}{7} = \frac{3a}{10} + \frac{2b}{7}$
 $20 \cdot 3 = ?$

- A) 15 B) 16 C) 17 D) 18 E) 19

6. $(x^2 - 1) \blacksquare (y^2 + 1) = 4x - 3y + 1$

$(48 \blacksquare 82) = ?$

- A) 0 B) 1 C) 2 D) 3 E) 4

7. $a \circ b = \frac{a \cdot b}{a+b}$

$a \blacksquare b = \frac{1}{a} + \frac{1}{b}$

$(8 \blacksquare 15) \times (8 \circ 15) = ?$

- A) 7 B) 8 C)
- $\frac{23}{8}$
- D) 1 E) 31

8. $x \blacktriangle y = \frac{\frac{1}{x} + \frac{1}{y}}{\frac{1}{x \cdot y}}$

$\frac{1}{4} \blacktriangle \frac{1}{3} = ?$

- A)
- $\frac{1}{3}$
- B)
- $\frac{1}{4}$
- C)
- $\frac{7}{12}$
- D) 7 E) 12

9. $x \blacklozenge y = 3x + 2y$

$5 \blacklozenge (x \blacklozenge 3) = 39$

$\Rightarrow x = ?$

- A) 6 B) 5 C) 4 D) 3 E) 2

10. $(a^2 \cdot b^2) \boxtimes (a+b) = 5a-b$

$84 \boxtimes 14 = ?$

- A) 38 B) 46 C) 49 D) 52 E) 56

11. $\blacktriangledown x = 1 + \frac{2}{3 + \frac{x}{4}}$

$\blacktriangledown x = 2$

$\Rightarrow x = ?$

- A) -12 B) -8 C) -4 D) 8 E) 12

12. $(a \cdot b) \odot (a-b) = a^2 + b^2$

$8 \odot 5 = ?$

- A) 72 B) 60 C) 56 D) 41 E) 34

13. $x \blacktriangle y = x^2 - y^2$

$510 \blacktriangle 490 = ?$

- A) 10000 B) 18000 C) 20000
D) 40000 E) 42000

14. $(5a-2) \blacktriangle (3b+1) = 6a+2b$

$a^2 \blacksquare (2b+2) = 5a - \frac{5}{b}$

$(8 \blacktriangle 13) - (16 \blacksquare 12) = ?$

- A) 0 B) 1 C) 2 D) 3 E) 4

15. $4A \cdot 5B = A^3 - \frac{3B}{4}$

$(16 \cdot 20) = ?$

- A) 16 B) 18 C) 20 D) 60 E) 61

16. $A \blacktriangle = \frac{4A}{5}$

$B \blacksquare = B^2 - 8$

$(20 \blacktriangle) \blacksquare = ?$

- A) 200 B) 242 C) 244 D) 246 E) 248

1. $\frac{19}{a \Delta b} = a - \frac{1}{b}$

$4 \Delta 5 = ?$

- A) 4 B) 5 C) 6 D) 7 E) 8

2. $a * b = \begin{cases} ab, a \geq b \\ a+b, a < b \end{cases}$

$x \circ y = \begin{cases} \frac{x}{y}, x \geq y \\ a+b, x < y \end{cases}$

$(3 * 12) \circ (10 \circ (2 * 1)) = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

3. $(2x + 3) * (2y - 3) = 3x + 2y$

$2(4 * 2) = ?$

- A) 13 B) 14 C) 15 D) 16 E) 17

4. $x \circ y = 2x + y - 1$

$a * b = (a \circ b) - 2ab + 1$

$1 * 3 = ?$

- A) -3 B) -2 C) -1 D) 0 E) 1

5. $(x - 1, y + 1) \Delta (m, n) = (x + n^{1/3}, y - m^{1/2})$

$(3, 12) \Delta (49, 27) = ?$

- A) (3,6) B) (4,9) C) (9,4) D) (7,5) E) (7,4)

6. $(a \Delta b) = (a^2 + ab + b^2)(a - b) + x$

$(4 \Delta 3) = 10$

$x = ?$

- A) -28 B) -27 C) -26 D) 26 E) 27

7. $(2x - y + 5) \circ (x + 2y - 3) = 2x - y^2$

$9 \circ 4 = ?$

- A) 3 B) 1 C) -3 D) -2 E) 2

8. $a \square b = \begin{cases} 2a + b & a \leq b \\ 2a - b & a > b \end{cases}$

$(2 \square 1) \square (1 \square 3) = ?$

- A) 10 B) 11 C) 12 D) 13 E) 14

9. $2^x \square 3^y = 2^x + y^x - 1$

$a \circ b = 2^a + (-1)^b$

$16 \square 9 = x \circ 9$

$x = ?$

- A) 2 B) 3 C) 5 D) 6 E) 7

10. $x \square y = \frac{(x-1)(y+1)}{x^{y+3} - y^x}$

$a \Delta b = -2^a + b^{-1}$

$1 \Delta (2 \square 1) = ?$

- A) 6 B) 7 C) 8 D) 9 E) 10

11. $\frac{3}{x} \square \frac{y}{2} = 2x + 3y$

$a * b = ab - 1$

$\left(6 \square \frac{3}{2}\right) = ?$

- A) 8 B) 9 C) 10 D) 11 E) 12

12. $9^{2a+b} = 27^{\frac{a+b}{3}}$

$(8 * 4) * 6 = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

13. $x^{xoy} = \frac{1}{5}(x^2 + y^2) \cdot y^{xoy}$

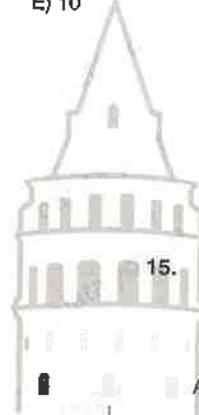
$2 \circ 4 = ?$

- A) 4 B) 2 C) -1 D) -2 E) -3

14. $a * b = \frac{a}{b + (a * b)}$

$-4 * 4 = ?$

- A) -4 B) -2 C) 2 D) 4 E) 8



15. $x \Delta y = \begin{cases} x - y, & x \geq y \\ x + 2y, & x < y \end{cases}$

$(5 \Delta 7) \Delta 9 = ?$

- A) 5 B) 8 C) 10 D) 11 E) 14

16. $a * b = \begin{cases} \sqrt{a+b}, & a+b \text{ tam kare (exact square)} \\ a^2 - b^2, & \text{diğer (otherwise)} \end{cases}$

$7 * (11 * 14) = ?$

- A) $\sqrt{12}$ B) 7 C) 10 D) $\sqrt{37}$ E) 24

1. $\frac{1}{a \Delta b} = \frac{b}{a} + \frac{a}{b} - 2$
 $6 \Delta 4 = ?$

- A) 4 B) 5 C) 6 D) 7 E) 8

2. $a \circ b = a^2 + b^2 - 10 + 2ab$
 $(-90) \circ (100) = ?$

- A) 90 B) 100 C) 110 D) 120 E) 130

3. $\frac{1}{a} \Delta \frac{1}{b} = 20ab + 3\left(\frac{1}{a} \Delta \frac{1}{b}\right)$
 $5 \Delta 2 = ?$

- A) -2 B) -1 C) 0 D) 1

4. $2^x \Delta y = y^x$
 $a \circ b = \frac{a \Delta b}{6} + 2a + b$
 $3 \circ 4 = ?$

- A) 11 B) 10 C) 9 D) 8 E) 7

5. $(2x - y) \circ (x^2 + y^2) = 6x + y$
 $(7 \circ 10) = ?$

- A) 15 B) 16 C) 17 D) 18 E) 19

6. $m \circ n = \frac{-2 - 4(m \circ n)}{4}$
 $2 \circ (-4) = ?$

- A) -2/4 B) -1/4 C) 0 D) 1/4 E) 2/4

7. $a \Delta b = 2a + 2b + 10$
 $2 \Delta x = -8$
 $x = ?$

- A) -10 B) -9 C) -11 D) 9 E) 11

8. $m \circ n = 3(n \circ m) + 2m$
 $3 \circ 1 = ?$

- A) -2 B) -3/2 C) -1 D) -1/2 E) 0

9. $m \circ n = 3m + 2$ ($m \Delta n$)

$m \Delta n = 3n - (m \circ n)$

$2 \circ 1 = ?$

- A) 2 B) 4 C) 6 D) 8 E) 10

10. $a * b = \frac{a}{2} + \frac{b}{2} - 2(b * a)$

$5 * 1 = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

11. $a \boxplus b = \begin{cases} a \boxtimes b, & a^2 < b \\ a \boxdiv b, & a^2 \geq b \end{cases}$

$a \boxtimes b = (a-1) \cdot (b+1)$

$a \boxdiv b = \sqrt{a^2 - b}$

$(2 \boxdiv 7) \boxplus (17 \boxtimes 64) = ?$

- A) 4 B) 7 C) 10 D) 13

12. $a \boxdot b = a^2 + b^2$

$m \circ n = 2mn$

$(100 \boxdot (-90)) + (100 \circ (-90)) = ?$

- A) 0 B) 90 C) -90 D) 100 E) -100

13. $x \circ y = \max(x^2 - y^2, 2xy)$

$(3 \circ 2) \circ 4 = ?$

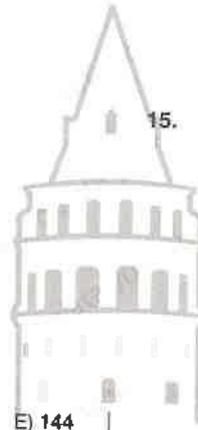
- A) 64 B) 96 C) 112 D) 128 E) 144

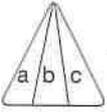
14. $x * y = \min(x, y)$

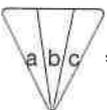
$(x+y) \Delta (x-y) = 2x+y$

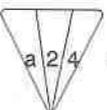
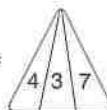
$(17 \Delta 5) + (12 \Delta 8) = ?$

- A) 18 B) 20 C) 22 D) 24 E) 28

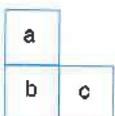
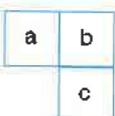


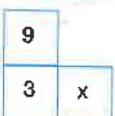
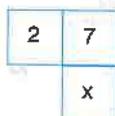
15.  $= a^2 \cdot (b+c)$

 $= a \cdot (b^2+c^2)$

 $=$  $\Rightarrow a = ?$

- A) 2 B) 4 C) 6 D) 8 E) 12

16.  $= a^b \cdot b^c$  $= (a+b)^c$

 $=$  $\Rightarrow x = ?$

- A) 2 B) 6 C) 7 D) 9 E) 15

1. $a \Delta b = \sqrt{ab^2} + a^2 - b^2 + 3$

$\square (m) = 2m - 28$

$\square (4 \Delta 2) = ?$

- A) 6 B) 8 C) 10 D) 12 E) 14

2. $2x \square 3y = 3x - 2y$

$3m \circ 4n = 4m - 3n$

$15 \circ (16 \square 18) = ?$

- A) 11 B) 12 C) 13 D) 14 E) 15

3. $a \square b = a^3 + 3a^2b + ab^2 - b^3$

$n \circ m = -2nm^2 - 2m^3$

$(17 \square 3) - (17 \circ 3) = ?$

- A) 800 B) 8000 C) 16000 D) 1600 E) 2400

4. $\frac{3x+y}{4} \circ \frac{2y+5}{3} = y - \frac{x}{2}$

$5 \circ 7 = ?$

- A) 4 B) 5 C) 6 D) 7 E) 8

5. $a \square b = 2a + 2b + ab + 2$

$3 \square x = 3$

$x = ?$

- A) -2 B) -1 C) 0 D) 1 E) 2

6. $a \square b = (a-b)(a^2 - 2ab + b^2)$

$2020 \square 2019 = ?$

- A) 2 B) 1 C) 0 D) -1 E) -2

7. $(4x + 6) \square (3y - 2) = 2x \Delta (y + 1)$

$x \Delta (2y + 2) = 2x - y + 1$

$10 \square 7 = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

8.
$$\left. \begin{aligned} x \alpha y^3 = 2y \beta x^2 \\ 2x \beta (x + y) = x + y^2 \end{aligned} \right\} 2 \alpha (4 \beta 7) = ?$$

- A) 4 B) 7 C) 9 D) 11 E) 14

9. $(a, b) \nabla (c, d) = \left(\frac{a}{c}, \frac{b}{d} \right)$
 $(6, 10) \nabla (2, 5) = (3, 2)$
 $(14, 9) \nabla (7, 3) = ?$
 A) (2,3) B) (2,4) C) (3,3) D) (3,4) E) (5,2)

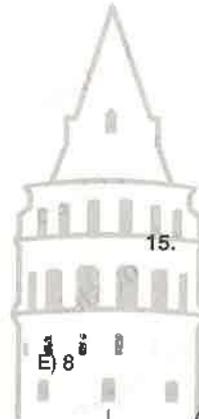
10. $(a, b) * (c, d) = (b \circ c, a \circ d)$
 $x \circ y = x^2 + 16 - y^2$
 $(2, 3) * (4, 5) = (m, n)$ } $\Rightarrow m + n = ?$
 A) 3 B) 4 C) 5 D) 6 E) 8

11. $\left(\frac{x}{y}\right) * (5x + 2y) = x + \frac{28}{y-7}$
 $\frac{2}{7} * 72 = ?$
 A) 4 B) 5 C) 6 D) 7 E) 8

12. $\heartsuit p = \frac{p + \sqrt{p}}{p - \sqrt{p}}$
 $(\heartsuit 9) + (\heartsuit \frac{9}{4}) = ?$
 A) 5 B) 6 C) 7 D) 8 E) 9

13. $(x, y, z) = xy + z$
 $(5, k, 16) = (4, 7, k)$ } $k = ?$
 A) 3 B) 4 C) 5 D) 7 E) 8

14. $a \boxplus b = a^b + (a + 1)^b + (a + 2)^b + (2a)^b$
 $2 \boxplus 3 = 99$
 $3 \boxplus 2 = ?$
 A) 74 B) 78 C) 86 D) 92 E) 8



15. $\boxed{X}^y = x^y \cdot x^{y+1} \cdot x^{y+2} \cdot \dots \cdot x^2$
 $\boxed{3}^5 = 3^{14}$
 $\boxed{8}^{10} = ?$
 A) 2^{146} B) 4^{72} C) 8^{49} D) 2^{154} E) 4^{76}

16. $\& m = \sqrt{m + \sqrt{m + \sqrt{m + \dots}}}$
 $\& m = 6$
 $m = ?$
 A) 10 B) 20 C) 30 D) 40 E) 50

1. $2^a \otimes b = a + \frac{1}{b}$
 $\Rightarrow \frac{1}{6} \otimes 3 = ?$

- A) 6 B) 4 C) -3 D) -2 E) -1

2. I. $x^3 \boxplus (x+2y+1) = x^2 - y^2$
 II. $-1 \boxplus 6 = -8$
 III. $8 \boxplus 1 = ?$

- A) 3 B) 4 C) 5 D) 6 E) 8

3. $\frac{16}{4+(a \ominus b)} = 2^a - 2^b$

$\Rightarrow 4 \ominus 3 = ?$

- A) -2 B) -4 C) 4 D) 6 E) 8

4. $p \diamond r = (2p-r)^2 + 4pr$
 $\Rightarrow \sqrt{2} \diamond \sqrt{6} = ?$

- A) 12 B) 14 C) 15 D) 18 E) 20

5. $k^{k^a} - a^{x^a} = k^{a-1} + a^{k-1}$
 $\Rightarrow 5 \heartsuit 2 = ?$

- A) 1 B) 2 C) 3 D) -2 E) -1

6. I. $\left(\frac{1}{a} + \frac{1}{b}\right) * \left(\frac{1}{a^2} - \frac{1}{b^2}\right) = \frac{a-b}{a \cdot b}$

II. $-2 * 4 = 2$

III. $8 * 32 = ?$

- A) 4 B) 2 C) 1 D) -2 E) -4

7. $2x \Delta y = x^2 + y^2 - (y \Delta 2x)$
 $\Rightarrow 8 \Delta 8 = ?$

- A) 24 B) 32 C) 40 D) 48 E) 64

8. $a \& b = (a+b)^3 - 3a \cdot b \cdot (a+b)$
 $\Rightarrow \sqrt[3]{9} \& \sqrt[3]{-7} = ?$

- A) 16 B) 9 C) 8 D) 2 E) -7

9. $a \% b = \sqrt{a+b}$
 $\Rightarrow 6 \% (5\%4) = ?$

A) 2 B) 3 C) 4 D) 5 E) 6

10. $x \boxplus y = x(x+y) - 3xy + y^2$
 $\Rightarrow 2017 \boxplus 2020 = ?$

A) 4 B) 6 C) 9 D) 16 E) 20

11. $\frac{a}{b} = \frac{a^1 \cdot a^2 \cdot a^3 \dots a^b}{b^1 \cdot b^2 \cdot b^3 \dots b^a}$

$\frac{a}{b} = \sqrt{a+(a+1)+(a+2)+\dots+b}$

$\Rightarrow \frac{2}{4} + \frac{1}{8} = ?$

A) 11 B) 22 C) 33 D) 44 E) 55

12. $x \nabla y = \frac{(x+y)!}{x! \cdot y!}$
 $2(x \nabla 2) = 3 \nabla 5$
 $\Rightarrow x = ?$

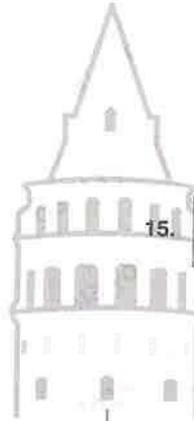
A) 3 B) 4 C) 5 D) 6 E) 7

13. $\S x = \begin{cases} x^2, & x < 10 \\ \frac{x}{2}, & x \geq 10 \end{cases}$
 $\Rightarrow \S \S 4 = ?$

A) 2 B) 4 C) 6 D) 8 E) 16

14. $a \odot b = \begin{cases} \frac{a \cdot b}{2}, & a, b \text{ çift (even)} \\ a - b, & a, b \text{ tek (odd)} \end{cases}$
 $\Rightarrow (5 \odot 6) \odot 7 = ?$

A) 7 B) 8 C) 15 D) 24 E) 30



15. $\begin{matrix} r \\ \diagdown \\ s \end{matrix} \Rightarrow (s^r + r^s)^2 - (s^r - r^s)^2$

$\begin{matrix} s \\ \diagdown \\ r \end{matrix} = s^r$

$\begin{matrix} 4 \\ \diagdown \\ 8 \end{matrix} = \begin{matrix} 2 \\ \diagdown \\ r \end{matrix} \Rightarrow r = ?$

A) 16 B) 18 C) 25 D) 30 E) 32

16. $\frac{a}{a \star b} + \frac{a}{a \# b} = a^b$

$\frac{a}{a \# b} - \frac{b}{a \star b} = b^a$

$\Rightarrow 2 \# 3 = ?$

A) $\frac{7}{11}$ B) $\frac{13}{29}$ C) $\frac{14}{25}$ D) $\frac{23}{37}$ E) $\frac{13}{42}$

1. $2a + b^3 = a + 2b$
 $\Rightarrow 12 + (4+27) = ?$

- A) 4 B) 9 C) 10 D) 12 E) 18

2. $\sqrt{a} \square \sqrt{b} = \sqrt{a+b}$
 $\Rightarrow (12 \square 16) \square 15 = ?$

- A) 18 B) 20 C) 24 D) 25 E) 26

3. I. $(a, b) \times (c, d) = (b+c, ad)$
 II. $(3, 6) \times (2, 5) = (8, 15)$
 III. $(4, 9) \times (6, 4) = ?$

- A) (15, 15) B) (15, 16) C) (16, 15)
 D) (16, 16) E) (16, 17)

4. $(a, b) \heartsuit (c, d) = (ad - bc, ac + bd)$
 $(a, b) \heartsuit (7, 5) = (10, 14)$
 $\Rightarrow a + b = ?$

- A) -5 B) -3 C) 2 D) 7 E) 10

5. I. $\textcircled{a} = \frac{(2a)!}{a! + (a+1)!}$
 II. $\textcircled{2} = 3$
 III. $\textcircled{3} = ?$

- A) 19 B) 24 C) 28 D) 30 E) 32

6. $\textcircled{X} = 20 + \frac{18}{19 - \frac{20}{X}}$

$\textcircled{X} = 22$
 $\Rightarrow x = ?$

- A) 10 B) 5 C) 4 D) 2 E) 1

7. I. $(y) = \max(2^y, y^2)$
 II. $(5) = 32$
 III. $((3)) = ?$

- A) 125 B) 128 C) 250 D) 256 E) 512

8. I. $\sum_{n=1}^k a = na + (n+1)a + \dots + ka$
 II. $\sum_{n=1}^5 5 = 135$
 III. $\sum_{n=1}^8 8 = ?$

- A) 200 B) 210 C) 220 D) 230 E) 240

9. I. $a \odot b = a^2 - b^2$
 II. $a \square b = 2b \odot (a-b)$
 III. $7 \square 3 = ?$
- A) 12 B) 16 C) 20 D) 24 E) 28

10. I. $(a+b) \uparrow 2a = a^2 \downarrow b^2$
 II. $a^3 \downarrow (a-b) = b$
 III. $9 \uparrow 16 = ?$
- A) 2 B) 3 C) 4 D) 7 E) 9

11. I. $\begin{bmatrix} a & b & \odot & c & d \end{bmatrix} = a + b - c - d$
 II. $\begin{bmatrix} 2 & 3 & \odot & 4 & 5 \end{bmatrix} = 9$
 III. $\begin{bmatrix} 5 & x & \odot & 4 & 6 \end{bmatrix} = 11$
- $\Rightarrow x = ?$
- A) 2 B) 3 C) 4 D) 5

12. I. $\begin{array}{c} a \\ b \quad c \end{array} \rightarrow (b+c)^a$
 II. $\begin{array}{c} 3 \\ 2 \quad 1 \end{array} \rightarrow 27$
 III. $\begin{array}{c} 5 \\ -4 \quad x \end{array} \rightarrow 32$
- $\Rightarrow x = ?$
- A) 3 B) 4 C) 5 D) 6 E) 7

13. $2(x \diamond y) + y \diamond x = x^2 - 2y$
 $\Rightarrow 5 \diamond 3 = ?$
- A) -7 B) -5 C) 9 D) 11 E) 13

14. $x \S y = \frac{y \S x}{3} + 3x + y$
 $\Rightarrow 1 \S 5 = ?$
- A) 15 B) 18 C) 21 D) 24 E) 27

15. I. $a^* = a^3 - 3a^2$
 II. $b_* = b^2 + 5$
 III. $m^* + 3(m_*) = 42$
- $\Rightarrow m = ?$
- A) 1 B) 2 C) 3 D) 4 E) 5

16. I. $\lceil a, b \rceil = (a-b)^2 + 4ab$
 II. $\lfloor c, d \rfloor = \sqrt{cd} + 25$
 III. $\lceil -2018, 2020 \rceil + \lfloor 2009, 2019 \rfloor = ?$
- A) 2018 B) 2019 C) 2020 D) 2021 E) 2022

1. $7 \Rightarrow 13$
 $4 \Rightarrow 7$
 $9 \Rightarrow 9$
 $5 \Rightarrow ?$
- A) 4 B) 7 C) 9 D) 11 E) 13

2. $7 \blacktriangledown 3 = 2$
 $1 \blacktriangledown 2 = 3$
 $9 \blacktriangledown 4 = 7$
 $12 \blacktriangledown 5 = ?$
- A) 5 B) 9 C) 13 D) 15 E) 17

3. $14 \star 16 = 22$
 $22 \star 28 = 36$
 $30 \star 36 = 48$
 $46 \star 48 = ?$
- A) 50 B) 56 C) 64 D) 70 E) 72

4. $22 \blacktriangle 61 = 10$
 $71 \blacktriangle 23 = 15$
 $24 \blacktriangle 41 = 20$
 $33 \blacktriangle 30 = ?$
- A) 26 B) 28 C) 30 D) 32 E) 33

5. $\sqrt{16} = 21$
 $\sqrt{24} = 30$
 $\sqrt{12} = 15$
 $\sqrt{29} = ?$
- A) 35 B) 37 C) 40 D) 44 E) 49

6. $4 \blacktriangledown 36 = 16$
 $3 \blacktriangledown 21 = 9$
 $6 \blacktriangledown 78 = 36$
 $5 \blacktriangledown 15 = ?$
- A) 5 B) 16 C) 20 D) 25 E) 49

7. $18 \& 14 = 50$
 $14 \& 22 = 50$
 $11 \& 28 = 50$
 $16 \& 26 = ?$
- A) 52 B) 58 C) 60 D) 64 E) 66

8. $42 \textcircled{+} 11 = 64$
 $20 \textcircled{+} 25 = 49$
 $21 \textcircled{+} 30 = 27$
 $10 \textcircled{+} 75 = ?$
- A) 10 B) 12 C) 16 D) 25 E) 36

9. $47 \square 34 = 40$
 $54 \square 48 = 52$
 $69 \square 40 = 54$
 $75 \square 64 = ?$

A) 56 B) 57 C) 58 D) 59 E) 60

10. $16 \blacktriangle 24 = 30$
 $28 \blacktriangle 26 = 42$
 $34 \blacktriangle 38 = 50$
 $37 \blacktriangle 44 = ?$

A) 58 B) 60 C) 65 D) 72 E) 74

11. $73 \textcircled{+} 57 = 61$
 $55 \textcircled{+} 30 = 52$
 $99 \textcircled{+} 81 = 81$
 $84 \textcircled{+} 63 = ?$

A) 12 B) 26 C) 41 D) 52 E) 71

12. $20 \otimes 48 = 16$
 $17 \otimes 82 = 45$
 $39 \otimes 40 = 62$
 $24 \otimes 77 = ?$

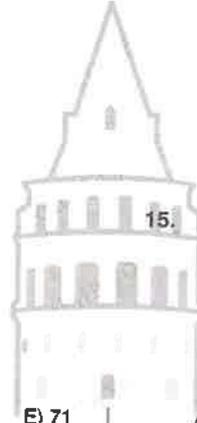
A) 29 B) 33 C) 37 D) 41 E) 45

13. $12 \oslash 18 = 36$
 $16 \oslash 27 = 49$
 $28 \oslash 15 = 75$
 $20 \oslash 12 = ?$

A) 46 B) 54 C) 57 D) 65 E) 68

14. $32 \leftarrow 14 = 25$
 $40 \leftarrow 26 = 32$
 $54 \leftarrow 22 = 36$
 $66 \leftarrow 50 = ?$

A) 44 B) 49 C) 52 D) 54 E) 60



15. $22 * 43 = 56$
 $36 * 51 = 51$
 $40 * 62 = 66$
 $55 * 81 = ?$

A) 73 B) 77 C) 83 D) 88 E) 91

16. $(633) \rightarrow 99$
 $(214) \rightarrow 16$
 $(424) \rightarrow 48$
 $(148) \rightarrow ?$

A) 121 B) 144 C) 169 D) 196 E) 225

1. I. $\square 42 = 36$

II. $\square 26 = 48$

III. $\square 50 = 30$

IV. $\square 72 = ?$

A) 32 B) 45 C) 54 D) 63 E) 72

2. I. $8 \beta 4 = 5$

II. $3 \beta 7 = 3$

III. $5 \beta 5 = 7$

IV. $6 \beta 3 = ?$

A) 5 B) 6 C) 7 D) 8 E) 9

3. I. $\uparrow 123 = 33$

II. $\uparrow 224 = 44$

III. $\uparrow 513 = 36$

IV. $\uparrow 424 = ?$

A) 34 B) 46 C) 52 D) 58 E) 64

4. I. $32 \odot 51 = 81$

II. $81 \odot 23 = 100$

III. $14 \odot 22 = 64$

IV. $50 \odot 42 = ?$

A) 36 B) 49 C) 144 D) 196 E) 256

5. I. $325 \rightarrow 3$

II. $442 \rightarrow 23$

III. $733 \rightarrow 36$

IV. $257 \rightarrow ?$

A) 2 B) 3 C) 5 D) 7 E) 9

6. I. $12 \oplus 23 = 8$

II. $18 \oplus 13 = 4$

III. $24 \oplus 10 = 7$

IV. $52 \oplus 18 = ?$

A) 7 B) 9 C) 11 D) 13 E) 15

7. I. $\% 13 = 8$

II. $\% 34 = 7$

III. $\% 25 = 21$

IV. $\% 36 = ?$

A) 18 B) 23 C) 27 D) 32 E) 36

8. I. $2 * 5 = 15$

II. $3 * 4 = 22$

III. $4 * 8 = 16$

IV. $5 * 5 = ?$

A) 20 B) 24 C) 28 D) 30 E) 32

9. I. $14 \ominus 33 = 38$
 II. $22 \ominus 46 = 48$
 III. $32 \ominus 54 = 44$
 IV. $45 \ominus 64 = ?$
- A) 38 B) 42 C) 46 D) 50 E) 54

10. I. $\times 92 = 34$ II. $\times 43 = 29$
 III. $\times 41 = 21$ IV. $\times 94 = ?$
- A) 38 B) 92 C) 316 D) 636 E) 812

11.

1	5	⊗	2	4	→	9
2	4	⊗	8	0	→	25
3	2	⊗	1	8	→	16
1	6	⊗	9	0	→	?
- A) 16 B) 25 C) 26 D) 49 E) 64

12. I. $14 \boxplus 22 = 63$
 II. $32 \boxplus 18 = 25$
 III. $25 \boxplus 49 = 47$
 IV. $33 \boxplus 32 = 56$
- } $16 \boxplus 48 = ?$
- A) 18 B) 24 C) 27 D) 35 E) 46

13. I. $16 \Omega 49 = 22$
 II. $64 \Omega 25 = 26$
 III. $9 \Omega 81 = 24$
 IV. $36 \Omega 36 = ?$
- A) 22 B) 24 C) 26 D) 28 E) 30

14.

	= 30	;		= 35
	= 44			= 52
⇒  = ?				
- A) 77 B) 81 C) 85 D) 89 E) 93

15. I. $5 \star 9 = 24$
 II. $2 \star 8 = 18$
 III. $6 \star 9 = 21$
 IV. $4 \star 7 = ?$
- A) 12 B) 15 C) 18 D) 21 E) 24

16. I. $\circ 24 = 164$
 II. $\circ 52 = 425$
 III. $\circ 43 = 916$
 IV. $\circ 17 = ?$
- A) 289 B) 357 C) 491 D) 576 E) 624

1. I. $2 * 3 = 7$
 II. $6 * 4 = 10$
 III. $9 * 5 = 16$
 IV. $6 * 6 = ?$
- A) 25 B) 28 C) 30 D) 32 E) 34

2. I. $\boxed{214} = 2$
 II. $\boxed{389} = 6$
 III. $\boxed{555} = 5$
 IV. $\boxed{694} = ?$
- A) 4 B) 5 C) 6 D) 8 E) 9

3. I. $7 + 4 = 32$
 II. $3 + 8 = 32$
 III. $15 + 2 = 32$
 IV. $4 + 9 = ?$
- A) 37 B) 39 C) 41 D) 43 E) 45

4. I. $\heartsuit 34 = 21$
 II. $\heartsuit 72 = 27$
 III. $\circ 43 = 25$
 IV. $\circ 44 = 32$
 V. $\circ (\heartsuit 64) = ?$
- A) 9 B) 13 C) 18 D) 26 E) 37

5. I. $47 \rightarrow 17, 39$
 II. $56 \rightarrow 19, 41$
 III. $77 \rightarrow 35, 63$
 IV. $84 \rightarrow A, B$
 $\Rightarrow A + B = ?$
- A) 36 B) 49 C) 64 D) 81 E) 100

6. I. $20 + 32 = 25$
 II. $12 + 51 = 36$
 III. $40 + 36 = 49$
 IV. $52 + 44 = ?$
- A) 74 B) 75 C) 76 D) 77 E) 78

7. I. $40 R 22 = 14$
 II. $23 R 16 = 81$
 III. $51 R 81 = 58$
 IV. $90 R 32 = ?$
- A) 19 B) 38 C) 54 D) 64 E) 78

8. I. $21 \Leftarrow 2$
 II. $79 \Leftarrow 5$
 III. $46 \Leftarrow 4$
 IV. $90 \Leftarrow ?$
- A) 3 B) 4 C) 5 D) 6 E) 7

9. I. $2 \star 3 = 1$
 II. $4 \star 4 = 4$
 III. $7 \star 5 = 10$
 IV. $6 \star 4 = ?$
- A) 14 B) 16 C) 18 D) 20 E) 24

- 10.
- | | | | | |
|------|---|---|----|----|
| n | 1 | 2 | 3 | 4 |
| d(n) | 2 | 8 | 18 | 32 |
- $\Rightarrow d(n) = ?$
- A) $2n$ B) $n^2 + n$ C) $n^3 + 1$ D) $n + 6$ E) $2n^2$

11. I. $11 \text{ H } 25 = 12$
 II. $23 \text{ H } 28 = 17$
 III. $34 \text{ H } 41 = 25$
 IV. $20 \text{ H } 40 = ?$
- A) 18 B) 20 C) 24 D) 28 E) 30

12. I. $3 \square 3 = 12$
 II. $7 \square 5 = 32$
 III. $5 \diamond 5 = 30$
 IV. $7 \diamond 1 = 50$
 V. $3 \diamond (5 \square 2) = ?$
- A) 18 B) 29 C) 34 D) 38 E) 40

13. I. (134, 21)
 II. (227, 82)
 III. (372, 24)
 IV. (433, ?)
- A) 28 B) 32 C) 45 D) 54 E) 63

14. I. $48 \ominus 16 = 248$
 II. $36 \ominus 18 = 189$
 III. $14 \ominus 50 = 725$
 IV. $10 \ominus 72 = ?$
- A) 476 B) 536 C) 624 D) 719 E) 844

15. I. # 426 # 30, 824, 252
 II. # 842 # 50, 616, 168
 III. # 536 # K, L, M
 $\Rightarrow K + L - M = ?$
- A) 562 B) 653 C) 712 D) 766 E) 824

16. I. $14 \text{ XX } 32 = 64$
 II. $71 \text{ XX } 42 = 81$
 III. $20 \text{ XX } 23 = 49$
 IV. $51 \text{ XX } 24 = ?$
- A) 36 B) 49 C) 100 D) 121 E) 169

1. I. $33 \odot 40 = 42$
 II. $25 \odot 35 = 65$
 III. $62 \odot 44 = 46$
 IV. $27 \odot 52 = ?$

A) 32 B) 36 C) 44 D) 48 E) 52

2. I. $36 \boxtimes 25 = 256$
 II. $64 \boxtimes 16 = 289$
 III. $16 \boxtimes 25 = 196$
 IV. $49 \boxtimes 81 = ?$

A) 169 B) 225 C) 324 D) 361 E) 484

3. I. $2 \triangleright 8 = 4$
 II. $9 \triangleright 4 = 6$
 III. $7 \triangleleft 9 = 4$
 IV. $22 \triangleleft 14 = 6$
 V. $24 \triangleright (24 \triangleleft 12) = ?$

A) 4 B) 6 C) 8 D) 12

4. I. $26 \textcircled{A} 44 = 36$
 II. $32 \textcircled{A} 58 = 52$
 III. $28 \textcircled{Y} 36 = 32$
 IV. $34 \textcircled{Y} 62 = 48$
 V. $(24 \textcircled{A} 32) \textcircled{Y} (38 \textcircled{A} 56) = ?$

A) 26 B) 28 C) 32 D) 34 E) 48

5. I. $39 = 18$
 II. $35 = 52$
 III. $36 = 63$
 IV. $38 = ?$

A) 32 B) 46 C) 61 D) 72 E) 94

6. I. $38 \rightarrow 42$
 II. $79 \rightarrow 36$
 III. $92 \rightarrow 81$
 IV. $49 \rightarrow ?$

A) 36 B) 48 C) 54 D) 63 E) 72

7. I. $\boxed{33} = 42$
 III. $\boxed{53} = 68$

A) 56 B) 64

- II. $\boxed{28} = 44$
 IV. $\boxed{47} = ?$

C) 72 D) 75 E) 81

8. I. $\boxed{52} = 32$
 III. $\boxed{34} = 64$

A) 28 B) 32 C) 36

- II. $\boxed{33} = 27$
 IV. $\boxed{26} = ?$

D) 64 E) 81

9. I. $17 \oplus 33 = 14$
 II. $34 \oplus 25 = 14$
 III. $53 \oplus 60 = 14$
 IV. $72 \oplus 27 = ?$

A) 14 B) 16 C) 18 D) 20 E) 22

10. I. $21 \opl� 82 = 24$
 II. $62 \opl� 51 = 35$
 III. $84 \opl� 93 = 23$
 IV. $81 \opl� 44 = ?$

A) 36 B) 52 C) 64 D) 72 E) 81

11. I. $48 \otimes 33 = 129$
 II. $20 \otimes 26 = 212$
 III. $79 \otimes 32 = 166$
 IV. $35 \otimes 83 = ?$

A) 712 B) 716 C) 818 D) 824 E) 916

12. I. $16 \circ F 24 = 16$
 II. $28 \circ F 56 = 56$
 III. $34 \circ F 51 = 34$
 IV. $22 \circ F 49 = ?$

A) 28 B) 36 C) 42 D) 54 E) 60

13. I. $\otimes 54 = 29, 81$
 II. $\otimes 75 = 47, 144$
 III. $\otimes 96 = ?, ?$

A) 72,256 B) 69,225 C) 72,196
 D) 58,225 E) 63,186

14. I. $\triangleright 3224 \rightarrow K, 169, 58$
 II. $\triangleright 4125 \rightarrow 36, L, 510$
 III. $\triangleright 1162 \rightarrow 121, 361, M$
 $\Rightarrow K + L + M = ?$

A) 316 B) 448 C) 540 D) 625 E) 776

15. I. $\oplus 18 = 18$ II. $\oplus 49 = 26$
 III. $\ominus 90 = 36$ IV. $\ominus 81 = 28$
 $\Rightarrow \oplus (\ominus 51) = ?$

A) 14 B) 16 C) 18 D) 20 E) 22

16. I. $\square 14 = 5$ II. $\square 24 = 32$
 III. $\circledast 33 = 3$ IV. $\circledast 46 = 8$
 $\Rightarrow \square \circledast 59 = ?$

A) 4 B) 6 C) 8 D) 12 E) 24



1. $678 \rightarrow 12$
 $599 \rightarrow 32$
 $456 \rightarrow 51$
 $999 \rightarrow ?$

A) 48 B) 56 C) 64 D) 72 E) 81

2. $826 \rightarrow 4$
 $743 \rightarrow 5$
 $944 \rightarrow 7$
 $738 \rightarrow ?$

A) 14 B) 15 C) 16 D) 17 E) 18

3. I. $\exists 27632 = 32672$
 II. $\exists 53819 = 19835$
 III. $\exists 72734 = 34727$
 IV. $\exists 41846 = ?$

A) 44861 B) 46418 C) 46814 D) 64814 E) 14486

4. I. $\square 63549 = 1818$
 II. $\square 49898 = 3625$
 III. $\square 76925 = 4216$
 IV. $\square 59789 = ?$

A) 3936 B) 4524 C) 4827 D) 5618 E) 5826

5. I. $\checkmark 4323 = 18$
 II. $\checkmark 2435 = 22$
 III. $\checkmark 5281 = 21$
 IV. $\checkmark 3723 = ?$

A) 20 B) 21 C) 22 D) 23 E) 24

6. I. G $4916 = 47$
 II. G $8125 = 59$
 III. G $3649 = 76$
 IV. G $6481 = ?$

A) 57 B) 65 C) 79 D) 86 E) 98

7. I. $\square 456591 = 1559$
 II. $\square 784722 = 1974$
 III. $\square 598624 = 2268$
 IV. $\square 897533 = ?$

A) 1683 B) 1756 C) 1897 D) 2368 E) 2459

8. I. $\Sigma 3432 = 27$
 II. $\Sigma 2143 = 42$
 III. $\Sigma 4271 = 65$
 IV. $\Sigma 9412 = ?$

A) 27 B) 34 C) 42 D) 53 E) 65

9. I. (216144) = 99
 II. (125121) = 48
 III. (702225) = 99
 IV. (512016) = ?
 A) 48 B) 67 C) 78 D) 84 E) 99

10. I. $\overrightarrow{816289} = 4172$
 II. $\overrightarrow{125256} = 5161$
 III. $\overrightarrow{804196} = 2142$
 IV. $\overrightarrow{164225} = ?$
 A) 9242 B) 8151 C) 7322 D) 6161 E) 5172

11. I. $\oplus 124832 = 4$
 II. $\oplus 117428 = 3$
 III. $\oplus 145945 = 4$
 IV. $\oplus 126636 = ?$
 A) 0 B) 2 C) 3 D) 4 E) 5

12. $\left. \begin{array}{l} 1 \ 6 \ 8 \ 4 \ 4 \\ 1 \ 8 \ 9 \ 6 \ 3 \\ 9 \ 1 \ 0 \ 9 \ 1 \\ 2 \ 0 \ 9 \ 1 \ 5 \\ 1 \ 5 \ a \ b \ c \end{array} \right\} \Rightarrow abc = ?$
 A) 563 B) 636 C) 724 D) 835 E) 948

13. I. $\triangleright 7385 = 13$
 II. $\triangleright 4562 = 13$
 III. $\triangleright 6474 = 13$
 III. $\triangleright 5593 = ?$
 A) 13 B) 14 C) 15 D) 16 E) 17

14. I. $\otimes 27639 = 1618$
 II. $\otimes 59787 = 2435$
 III. $\otimes 45979 = 2136$
 IV. $\otimes 89998 = ?$
 A) 1672 B) 1854 C) 2463 D) 2542 E) 2764

15. I. $\text{♪} 278358 = 872365$
 II. $\text{♪} 357464 = 453476$
 III. $\text{♪} 792157 = 797125$
 IV. $\text{♪} 564369 = ?$
 A) 546639 B) 634596 C) 665394
 D) 965346 E) 963456

16. $\left. \begin{array}{l} 4 \ 6 \ 2 \ 4 \ 8 \\ 7 \ 3 \ 2 \ 1 \ 2 \\ 3 \ 5 \ 1 \ 5 \ 5 \\ 0 \ 4 \ 9 \ 2 \ 0 \\ G \ L \ 1 \ 4 \ T \end{array} \right\} \Rightarrow G+L+T = ?$
 A) 12 B) 13 C) 14 D) 15 E) 16

1. I. $27 \boxtimes 28 \oplus 14 = 25$
 II. $8 \otimes 4 \boxplus 13 = 60$
 III. $7 \boxplus 12 \boxtimes 21 = 69$
 IV. $26 \oplus 64 \otimes 16 = ?$

A) 22 B) 24 C) 26 D) 28 E) 30

2. I. $2 \otimes (1 \oplus 3) = 2$
 II. $10 \oplus (15 \otimes 21) = 4$
 III. $6 \oplus (5 \otimes 4) = 3$
 IV. $12 \oplus (9 \oplus 7) = ?$

A) 3 B) 4 C) 5 D) 6 E) 7

3. I. $15 \otimes 27 \oplus 18 = 6$
 II. $4 \otimes 7 \oplus 12 = 16$
 III. $18 \oplus 16 \oplus 8 = 20$
 IV. $24 \oplus 18 \otimes 12 = ?$

A) 12 B) 16 C) 18 D) 20 E) 24

4. I. $10 \boxplus (12 \boxplus 8) = 4$
 II. $18 \boxplus (16 \boxplus 10) = 12$
 III. $25 \boxplus (5 \boxplus 9) = 22$
 IV. $33 \boxplus (49 \boxplus 36) = ?$

A) 5 B) 6 C) 7 D) 12 E) 14

5. I. $10 \oplus (18 \oplus 12) - 3$
 II. $22 \oplus (19 \oplus 17) = 10$
 III. $34 \oplus (62 \oplus 58) = 16$
 IV. $27 \oplus (50 \oplus 46) = ?$

A) 13 B) 15 C) 17 D) 19 E) 21

6. I. $3 \otimes 4 \otimes 7 = 5$
 II. $12 \otimes 9 \otimes 3 = 9$
 III. $6 \otimes 3 \otimes 3 = 15$
 IV. $18 \otimes 9 \otimes 7 = ?$

A) 7 B) 8 C) 9 D) 14 E) 16

7. I. $(14 \boxtimes 16) \boxtimes (18 \boxtimes 24) = 18$
 II. $(26 \boxtimes 18) \boxtimes (32 \boxtimes 28) = 26$
 III. $(12 \boxtimes 26) \boxtimes (15 \boxtimes 19) = 15$
 IV. $(24 \boxtimes 24) \boxtimes (16 \boxtimes 48) = ?$

A) 24 B) 26 C) 28 D) 30 E) 32

8. I. $(18 \otimes 3) \otimes (16 \otimes 4) = 10$
 II. $(26 \otimes 21) \otimes (23 \otimes 19) = 20$
 III. $(12 \otimes 20) \otimes (12 \otimes 2) = 10$
 IV. $(32 \otimes 36) \otimes (14 \otimes 34) = ?$

A) 5 B) 10 C) 15 D) 20 E) 25

9. I. $\diamond \diamond 5 = 2$
 II. $\diamond \diamond 13 = 4$
 III. $\diamond \diamond 45 = 12$
 IV. $\diamond \diamond 81 = ?$
- A) 17 B) 18 C) 19 D) 20 E) 21

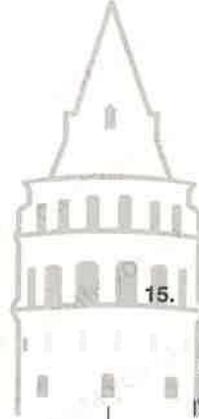
10. I. $10 \downarrow 16 \uparrow 8 = 8$
 II. $4 \leftarrow 8 \downarrow 16 = 16$
 III. $9 \rightarrow 10 \uparrow 10 = 10$
 IV. $27 \uparrow 9 \leftarrow 3 = ?$
- A) 3 B) 9 C) 12 D) 27 E) 81

11. I. $15 \square (28 \square 5) = 8$
 II. $24 \square (20 \square 4) = 16$
 III. $21 \square (12 \square 3) = 10$
 IV. $54 \square (42 \square 7) = ?$
- A) 5 B) 7 C) 8 D) 10 E) 14

12. I. $(1 \times 4) \times (16 \times 4) = 4$
 II. $(4 \times 9) \times (12 \times 3) = 6$
 III. $(3 \times 27) \times (2 \times 8) = 6$
 IV. $(16 \times 1) \times (8 \times 32) = ?$
- A) 4 B) 6 C) 8 D) 12 E) 16

13. I. $4 \bullet 6 \dashv 8 = 52$
 II. $10 \otimes 5 \bullet 50 = 52$
 III. $8 \dashv 7 \times 6 = 50$
 IV. $56 \square 42 \otimes 14 = ?$
- A) 50 B) 51 C) 52 D) 53 E) 54

14. I. $(6 \diamond 3) \diamond 2 = 44$
 II. $(4 \diamond 4) \oplus 6 = 32$
 III. $(5 \oplus 5) \oplus 10 = 35$
 IV. $(4 \oplus 6) \diamond 5 = ?$
- A) 64 B) 72 C) 85 D) 93 E) 96



15. I. $\heartsuit \heartsuit 234 = 8$
 II. $\heartsuit \heartsuit 627 = 32$
 III. $\heartsuit \heartsuit 346 = 14$
 IV. $\heartsuit \heartsuit 862 = ?$
- A) 36 B) 42 C) 48 D) 52 E) 54

16. I. $16 \delta (22 \delta 25) \delta 34 = 16$
 II. $32 \delta (30 \delta 36) \delta 40 = 12$
 III. $22 \delta (24 \delta 26) \delta 21 = 12$
 IV. $51 \delta (42 \delta 14) \delta 50 = ?$
- A) 13 B) 14 C) 15 D) 16 E) 17

1. I. $\star + \circ = 1$
 II. $\circ + \diamond = 4$
 III. $\diamond + \star = 9$
 IV. $\star \cdot \diamond = ?$
- A) 12 B) 15 C) 16 D) 18 E) 20

- 2.
- A) 9 B) 12 C) 15 D) 18 E) 20

3. I. $\diamond + \odot + \boxtimes = 9$
 II. $5\odot - \boxtimes - \diamond = 15$
 III. $\diamond + \odot = 2\boxtimes$
 IV. $\odot \cdot \boxtimes + \diamond = ?$
- A) 8 B) 10 C) 14 D) 18 E) 24

4.
$$\left. \begin{array}{l} \text{I} + \text{J} - \text{K} = 5 \\ \text{II} + \text{I} + \text{K} = 11 \\ \text{J} \cdot \text{K} + \text{I} = 12 \end{array} \right\} \frac{\text{I}}{\text{I}} + \text{K} = ?$$
- A) 1 B) 11 C) 1111 D) == E) =

5. $\square \cdot \circ = 6$
 $2\circ - \square = 4$
 $\square + \circ = ?$
- A) 3 B) 4 C) 5 D) 6 E) 7

6. I.
 II.
 III.
- A) $\triangle \triangle$ B) \square C) \circ D) \circ E) \triangle

7.
- A) 1 B) $\frac{1}{2}$ C) 2 D) $\frac{3}{2}$ E) 3

8. $\oplus^2 - \otimes^2 = 32$
 $\otimes + \oplus = 16$
 $\oplus \times \otimes = ?$
- A) 48 B) 54 C) 56 D) 63 E) 72

9. $\triangle + \square \cdot \circ = 2$
 $\circ \cdot \triangle - \square = 5$
 $\triangle^2 + \square^2 = 12$

} $\Rightarrow 2\triangle - 5\square = ?$

A) 5 B) 7 C) 12 D) 19 E) 20

10. $\circ^2 + \infty \nabla = 65$
 $\nabla \cdot \circ = 8$
 $\circ - \nabla = ?$

A) 6 B) 7 C) 9 D) 10 E) 12

11. I. $\pi \cdot \circ = 30$
 II. $\circ \cdot \star = 24$
 III. $\star + \pi = 9$
 IV. $\pi - \star + \circ = ?$

A) 5 B) 6 C) 7 D) 8

12. $\diamond - \circ : \nabla = 12$
 $\nabla \cdot \diamond + \circ = ?$

A) 120 B) 130 C) 140 D) 150 E) 160

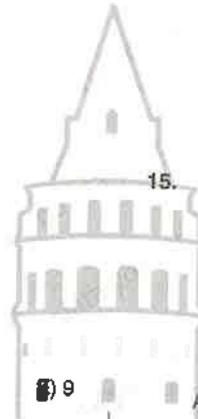
13. $7 \rightarrow 11 \rightarrow 8 \rightarrow 10$
 $16 \rightarrow 9 \rightarrow 3 \rightarrow 10$
 $5 \rightarrow 3 \rightarrow 4 \rightarrow ?$

A) 6 B) 8 C) 10 D) 12 E) 16

14. I. $\diamond + \circ = 4$
 II. $\square - \diamond = 5$
 III. $\circ + \square = 36$

} $\Rightarrow \frac{\circ + \diamond}{\square} = ?$

A) 1 B) 2 C) 3 D) 4 E) 6



15. $24 \xrightarrow{G} 12 \xrightarrow{G} 6 \xrightarrow{L} 36$
 $8 \xrightarrow{L} 48 \xrightarrow{T} 12 \xrightarrow{T} 3$
 $32 \xrightarrow{G} \cdot \xrightarrow{L} \cdot \xrightarrow{T} ?$

A) 8 B) 12 C) 15 D) 16 E) 18

16. $\boxed{2} + \boxed{3} = 5$
 $\boxed{1} + \boxed{\boxed{2}} = 10$
 $\boxed{\boxed{3}} + \boxed{\boxed{1}} = ?$

A) 26 B) 27 C) 28 D) 29 E) 30

Aşağıdaki tabloya göre 1 – 4 soruları cevaplayınız.

Answer the questions 1 – 4 according to the table given below.

♥	a	b	c	d	e
a	c	d	e	a	b
b	d	e	a	b	c
c	e	a	b	c	d
d	a	b	c	d	e
e	b	c	d	e	a

Örnek (Example):

$$a \heartsuit c = e$$

$$c \heartsuit c = b$$

1. $(a \heartsuit b) \heartsuit [c \heartsuit (d \heartsuit e)] = ?$

- A) a B) b C) c D) d E) e

2. $(a \heartsuit a) \heartsuit [(e \heartsuit e) \heartsuit a] = ?$

- A) a B) b C) c D) d E) e

3. $((c \heartsuit x) \heartsuit b) \heartsuit e = c$

$$\Rightarrow x = ?$$

- A) a B) b C) c D) d E) e

4. $(a \heartsuit (b \heartsuit c)) \heartsuit ((d \heartsuit e) \heartsuit f) = a$

$$\Rightarrow f = ?$$

- A) a ♥ a B) b ♥ b C) c ♥ c
D) d ♥ d E) e ♥ e

Aşağıdaki tabloya göre 5 – 8 soruları cevaplayınız.

Answer the questions 5 – 8 according to the table given below.

⊕	1	2	3	4	5	6
1	2	3	4	5	6	1
2	3	4	5	6	1	2
3	4	5	6	1	2	3
4	5	6	1	2	3	4
5	6	1	2	3	4	5
6	1	2	3	4	5	6

Örnek (Example):

$$2 \oplus 2^{-1} = 6 \Rightarrow 2^{-1} = 4$$

$$5^{-1} \oplus 5 = 6 \Rightarrow 5^{-1} = 1$$

5. $(5 \oplus 1^{-1}) \oplus (6^{-1} \oplus 3) = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

6. $(1 \oplus (2 \oplus 3^{-1})) \oplus (4 \oplus 5)^{-1} = ?$

- A) 6 B) 1 C) 2 D) 3 E) 4

7. $(1 \oplus 2 \oplus 3)^{-1} \oplus (4^{-1} \oplus 5^{-1} \oplus 6^{-1})^{-1} = ?$

- A) $1 \oplus 3$ B) $2 \oplus 1$ C) $3 \oplus 5$
D) $4 \oplus 4$ E) $5 \oplus 6$

8. $(4^{-1} \oplus 1) \oplus ((1 \oplus 2^{-1}) \oplus 2) = ?$

- A) 6^{-1} B) 1^{-1} C) 2^{-1} D) 3^{-1} E) 4^{-1}

Aşağıdaki tabloya göre 9 – 12 soruları cevaplayınız.

Answer the questions 9 – 12 according to the table given below.

★	K	L	M	N	P
K	M	N	P	K	L
L	N	P	K	L	M
M	P	K	L	M	N
N	K	L	M	N	P
P	L	M	N	P	K

Örnek (Example):

$$M^2 = M \star M = L$$

$$P^3 = P \star P \star P = L$$

9. $(K \star L^2) \star M^3 = ?$

- A) K B) L C) M D) N E) P

10. $M \star (P^{-2} \star N^{10}) = ?$

- A) K^2 B) L^2 C) M^2 D) N^2 E) P^2

11. $K^{13} \star (X \star M^{-3}) = L$

$$\Rightarrow X = ?$$

- A) P B) M C) N D) K E) L

12. $M^{2021} \star (P \star L)^{2022} = ?$

- A) K B) L C) M D) N E) P

13.

△	A	B	C
A	C	A	B
B	A	B	C
C	B	C	A

$$X^n = \underbrace{X \triangle X \triangle \dots \triangle X}_{n \text{ tane (n times)}}$$

$$X \triangle Y = X^2 \triangle Y^2$$

$$A \triangle (B^2 \triangle C^5) = ?$$

- A) $A \triangle A$ B) $B \triangle C$ C) $C \triangle C$
D) $B \triangle B$ E) $C \triangle B$

14.

☐	□	▽	○	☆	☆
□	○	☆	☆	□	▽
▽	□	▽	○	☆	☆
○	☆	□	▽	○	☆
☆	▽	○	☆	☆	□
☆	☆	☆	□	▽	○

$$((\square \nabla \nabla) \nabla \circ) \nabla (X \nabla \star) = \square$$

$$\Rightarrow X = ?$$

- A) □ B) ▽ C) ○ D) ☆ E) ☆

15.

●	1	2	3	4	5
1	1	2	3	4	5
2	2	3	4	5	1
3	3	4	5	1	2
4	4	5	1	2	3
5	5	1	2	3	4

$$a \triangle b = a \bullet (b \bullet b)$$

$$a \square b = (a \bullet b) \bullet a$$

$$(2 \triangle 5) \bullet (4 \square 1) = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

1. $a \blacktriangle b = a \cdot b - 6a + 27$

$a \blacktriangle a = 18$

$a = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

2. $x \circ y = x + y + (y \nabla x)$

$z \nabla t = \sqrt{t^2 + z^2}$

$7 \circ 24 = ?$

- A) 28 B) 32 C) 48 D) 52 E) 56

3. I. $13 \star 14 = 54$

II. $21 \star 19 = 80$

III. $25 \star 23 = 96$

IV. $21 \star 26 = ?$

- A) 80 B) 84 C) 30 D) 94 E) 100

4. $\frac{3}{x} \blacktriangle \frac{y}{2} = 6xy + 1$

$x \blacktriangle y = ?$

A) $\frac{36x}{y}$ B) $\frac{18x}{y} + 1$ C) $\frac{18y}{x} + 1$

D) $\frac{36y}{x}$ E) $\frac{36y+x}{x}$

5. $7^a \blacktriangleright b = 24^a + 5^b$

$(1 \blacktriangleright (1 \blacktriangleright 2)) = ?$

- A) 1 B) 2 C) 3 D) 4 E) 6

6. $x \ast y = x^2 + y^2 + 2 - 2xy$

$2019 \ast 2014 = ?$

- A) 27 B) 39 C) 66 D) 83 E) 100

7. I. $\blacklozenge 43 = 7$ 25 49

II. $\blacklozenge 47 = 33$ 65 121

III. $\blacklozenge 95 = 56$ 106 196

IV. $\blacklozenge 39 = ?$? ?

- A) 71,90,144 B) 71,91,144 C) 72,90,144

- D) 72,91,144 E) 70,90,144

8. $4 \circ 12 = 4$

$9 \circ 27 = 6$

$9 \circ 16 = 5$

$16 \circ 20 = ?$

- A) 3 B) 4 C) 5 D) 6 E) 8

9. $x \heartsuit y = \sqrt{x} + 2^y$

$25 \heartsuit 4 = ?$

- A) 20 B) 21 C) 25 D) 30 E) 31

10. I. $23 \blacktriangle 13 = 6$

II. $11 \blacktriangle 14 = 5$

III. $24 \blacktriangle 25 = 7$

IV. $54 \blacktriangle 27 = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9

11. $3^x \cdot 2^a = 6x + 8a - 1$

$\sqrt[3]{3} \cdot 2\sqrt{2} = ?$

- A) 11 B) 12 C) 13 D) 14 E) 15

12. $f(x) = \frac{6x-2}{x-1}$

$f(x) \heartsuit k = f^{-1}(k)$

$f(x) \heartsuit 8 = ?$

- A) -2 B) 2 C) 3 D) 4 E) 8

13. I. $25 \ominus 24 = 1$

II. $29 \ominus 27 = 4$

III. $58 \ominus 47 = 2$

IV. $59 \ominus 46 = 4$

$14 \ominus (39 \ominus 12) = ?$

- A) 1 B) 4 C) 9 D) 16 E) 25

14. $a^3 \cdot (3x-4) = \frac{a \cdot x}{a+x}$

$27 \cdot 14 = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

15. I. $5 \star 4 = 6$

II. $6 \star 5 = 7$

III. $9 \star 3 = 15$

IV. $16 \star 8 = ?$

- A) 20 B) 18 C) 16 D) 24 E) 12

16. $12a \oplus 16b = \sqrt{a+b}$

$3 \oplus 5 = ?$

- A) $\frac{3}{4}$ B) 1 C) 2 D) $\frac{12}{5}$ E) 3

1. I. $4 \otimes 5 = 3$
 II. $8 \otimes 10 = 6$
 III. $12 \otimes 15 = 9$
 IV. $17 \otimes 15 = ?$

A) 15 B) 16 C) 17 D) 18 E) 19

2. I. $10 \triangle 3 = 4$
 II. $15 \triangle 5 = 5$
 III. $20 \triangle 8 = 4$
 IV. $32 \triangle 12 = ?$

A) 2 B) 4 C) 6 D) 8 E) 10

3. I. $11 \circ 10 = 32$
 II. $15 \circ 10 = 40$
 III. $17 \circ 10 = 44$
 IV. $20 \circ 10 = ?$

A) 40 B) 50 C) 52 D) 56 E) 60

4. $(3x+2) \blacksquare (2y-5) = 4y-2x$
 $8 \blacksquare 15 = ?$

A) 32 B) 34 C) 36 D) 38 E) 40

5. I. $10 \blacksquare 3 = 49$
 II. $17 \blacksquare 8 = 81$
 III. $6 \blacksquare 2 = 16$
 IV. $12 \blacksquare 5 = ?$

A) 49 B) 50 C) 51 D) 52 E) 53

6. I. $15 \nabla 3 = 4$
 II. $27 \nabla 6 = 7$
 III. $63 \nabla 9 = 18$
 IV. $90 \nabla 27 = ?$

A) 20 B) 21 C) 22 D) 23 E) 24

7. I. $18 \circ 4 = 10$
 II. $24 \circ 5 = 13$
 III. $30 \circ 16 = 26$
 IV. $48 \circ 20 = ?$

A) 28 B) 30 C) 32 D) 34 E) 36

8. $32 \star 30 = 4$
 $53 \star 48 = 25$
 $12 \star 4 = 64$
 $117 \star 108 = ?$

A) 25 B) 49 C) 64 D) 81 E) 121

9. I. $1 \star 2 = 3$

II. $5 \star 5 = 130$

III. $3 \star 7 = 34$

IV. $6 \star 4 = ?$

- A) 200 B) 210 C) 220 D) 230 E) 240

10. I. $1 \star 9 = 4$

II. $2 \star 49 = 9$

III. $3 \star 169 = 16$

IV. $4 \star 121 = ?$

- A) 10 B) 13 C) 15 D) 17 E) 21

11. I. $16 \star 1 = 3$

II. $36 \star 4 = 4$

III. $81 \star 9 = 6$

IV. $144 \star 25 = ?$

- A) 1 B) 3 C) 5 D) 7 E) 9

12. $a \circ b = a^2 - 2ab + b^2$

$18 \circ 17 = ?$

- A) 0 B) 1 C) 2 D) 3 E) 4

13. $3x \blacktriangle y^3 = \frac{2x+y}{x}$

$x \star y = x^2 + y^2$

$(12 \blacktriangle 64) \star (24 \blacktriangle 8) = ?$

- A) 225 B) $\frac{1}{16}$ C) $\frac{17}{27}$ D) $\frac{225}{16}$ E) 16

14. I. $6 \star 7 = 52$

II. $3 \star 5 = 32$

III. $6 \star 6 = 48$

IV. $8 \star 1 = ?$

- A) 36 B) 38 C) 39 D) 40 E) 42

15. I. $112 \star 28 = 2$

II. $108 \star 12 = 3$

III. $96 \star 6 = 4$

IV. $256 \star 4 = ?$

- A) 6 B) 8 C) 10 D) 12 E) 14

16. I. $4 \star 16 = 1$

II. $65 \star 25 = 13$

III. $48 \star 64 = 6$

IV. $72 \star 9 = ?$

- A) 16 B) 18 C) 20 D) 22 E) 24

1. $a \times b = a^b - b^a$
 $a \nabla b = 4a + 1 - b$
 $\Rightarrow 3 \nabla (3 \times 2) = ?$
 A) 8 B) 9 C) 12 D) 16 E) 20

2. $x \Delta y = (x - y)^2$
 $\sqrt{a} \circ (6b + 2) = a \cdot b$
 $\Rightarrow 2 \Delta (3 \circ 8) = ?$
 A) 4 B) 9 C) 16 D) 25 E) 49

3. I. $\star 39 = 21$
 II. $\star 57 = 19$
 III. $\star 69 = 24$
 IV. $\star 77 = ?$
 A) 20 B) 21 C) 22 D) 23 E) 24

4. $a^2 \square 2^b = b^2 + 2a - 1$
 $16 \square 8 = ?$
 A) 9 B) 16 C) 20 D) 25 E) 36

5. $x \blacktriangle y = \begin{cases} x + y, & x < y \\ x - y, & x > y \\ x \cdot y, & x = y \end{cases}$
 $\Rightarrow (5 \blacktriangle 3) \blacktriangle (2 \blacktriangle 2) = ?$
 A) 6 B) 9 C) 11 D) 13 E) 15

6. I. $12 \oplus (36 \oplus 18) \oplus 6 = 1$
 II. $100 \oplus (25 \oplus 5) \oplus 10 = 2$
 III. $36 \oplus (48 \oplus 16) \oplus 2 = 6$
 IV. $24 \oplus (54 \oplus 9) \oplus 4 = ?$
 A) 9 B) 7 C) 5 D) 3 E) 1

7. I. $\bullet 31 = 8, \blacksquare 53 = 15$
 II. $\bullet 55 = 20, \blacksquare 73 = 21$
 $\Rightarrow \blacksquare (\bullet 74) = ?$
 A) 20 B) 22 C) 24 D) 26 E) 28

8. I. $\star 476 = 245$
 II. $\star 527 = 350$
 III. $\star (\star 812) = ?$
 A) 100 B) 80 C) 70 D) 50 E) 30

9. I. $\bullet 61 = 25$
 II. $\blacktriangle 54 = 9$
 $\Rightarrow \bullet 95 - (\bullet 87 + \blacktriangle 43) = ?$
 A) 0 B) 2 C) 4 D) 6 E) 8

10. $a \clubsuit b = \frac{a+b}{2b-a}$
 $6 \clubsuit b = 5$
 $\Rightarrow b = ?$
 A) 2 B) 4 C) 6 D) 8 E) 9

11. $(3a-b) \blacksquare a^2 = b^2$
 $7 \blacksquare 27 = ?$
 A) 4 B) 6 C) 8 D) 10 E) 12

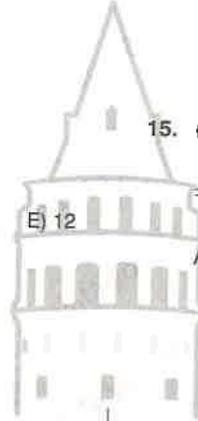
12. $A = \{x, y, z, v, w\}$
 $\left. \begin{array}{l} x \heartsuit y = z \\ x \heartsuit z = w \\ x \heartsuit x = v \end{array} \right\} \Rightarrow v \heartsuit y = ?$
 A) x B) y C) z D) v E) w

13. $a \otimes b = \min \{a + b, 2b - a\}$
 $\Rightarrow (8 \otimes 7) \otimes 4 = ?$
 A) 2 B) 5 C) 7 D) 8 E) 11

14. $x \rightarrow y = \begin{cases} \frac{x+y}{3}, & (x+y) \text{ tek (odd)} \\ 4x + 4y, & (x+y) \text{ çift (even)} \end{cases}$
 $\Rightarrow (7 \rightarrow 2) \rightarrow 1 = ?$
 A) 12 B) 14 C) 16 D) 17 E) 18

15. $(a, b) \odot (x, y) = \frac{\sqrt{a+x}}{2} + \sqrt{by}$
 $\Rightarrow (5, 4) \odot (11, 9) = ?$
 A) 4 B) 6 C) 8 D) 10 E) 12

16. $3 \cdot 4 = 31$
 $2 \cdot 8 = 16$
 $4 \cdot 9 = 73$
 $5 \cdot 15 = ?$
 A) 125 B) 135 C) 140 D) 145 E) 150



1. $(a * b) = \frac{a}{b} - \frac{b}{a}$

$$\Rightarrow (x+1) * x = \frac{4}{x}$$

$$\Rightarrow = ?$$

- A) -3 B) $-\frac{3}{2}$ C) -1 D) $\frac{3}{2}$ E) 3

2. $a \square b = a \cdot b + a^b$

$$\Rightarrow 4 \square 2 = ?$$

- A) 12 B) 16 C) 20 D) 24 E) 28

3. $\frac{1}{x} \circ \frac{1}{y} = \frac{2xy}{x-y}$

$$\Rightarrow 2 \circ 4 = ?$$

- A) $\frac{1}{4}$ B) $\frac{1}{3}$ C) 1 D) $\frac{1}{6}$ E) 2

4. $(3a + 13) \blacksquare (13 - 4b) = a^b$

$$25 \blacksquare 1 = ?$$

- A) 16 B) 27 C) 34 D) 64 E) 128

5. $4^a \square 4^b = (a+b)^2$

$$\Rightarrow \frac{1}{16} \square 256 = ?$$

- A) 4 B) 16 C) 18 D) 20 E) 36

6. $\sqrt{x} * \sqrt{y} = \frac{(x+y)-1}{6}$

$$\Rightarrow 4 * 3 = ?$$

- A) 14 B) 10 C) 8 D) 6 E) 4

7. $x \circ y = \frac{1}{\frac{1}{y} + \frac{1}{3x}}$

$$\frac{1}{5} \circ 3 = \frac{1}{3} \circ \frac{5}{x}$$

$$\Rightarrow x = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

8.

	A	B	C	D	E	F
A	F	A	B	C	D	E
B	A	B	C	D	E	F
C	B	C	D	E	F	A
D	C	D	E	F	A	B
E	D	E	F	A	B	C
F	E	F	A	B	C	D

$$\Rightarrow (A \blacksquare B) \blacksquare (C \blacksquare F) = ?$$

- A) A B) B C) C D) D E) F

9. $135 \cdot 123 = 3$

$612 \cdot 160 = 2$

$439 \cdot 185 = 2$

$811 \cdot 115 = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

10. $64 \star 8 = 8$

$125 \star 27 = 15$

$125 \star 1 = 5$

$27 \star 8 = ?$

- A) 6 B) 9 C) 12 D) 15 E) 18

11. $3 \heartsuit 4 = 8$
 $5 \heartsuit 11 = 9$
 $7 \heartsuit 9 = 19$ } $\Rightarrow 8 \heartsuit 21 = ?$

- A) 10 B) 11 C) 15 D) 16

12. $36 \circ 12 = 8$

$36 \circ 10 = 12$

$33 \circ 9 = 8$

$\Rightarrow 59 \circ 15 = ?$

- A) 13 B) 15 C) 16 D) 18 E) 20

13. I. $49 \blacktriangle 16 = 9$

II. $121 \blacktriangle 4 = 81$

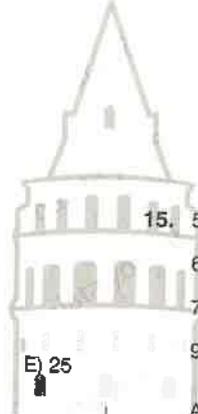
III. $36 \blacktriangle 9 = 9$

IV. $81 \blacktriangle 25 = ?$

- A) 9 B) 16 C) 25 D) 36 E) 40

14. $15 \oplus 2 = 19$
 $12 \oplus 5 = 49$
 $4 \oplus 8 = 21$ } $5 \oplus 6 = ?$

- A) 15 B) 16 C) 17 D) 18 E) 19



15. $5 \Rightarrow 2 = 25$

$6 \Rightarrow 4 = 38$

$7 \Rightarrow 4 = 52$

$9 \Rightarrow 5 = ?$

- A) 81 B) 82 C) 83 D) 84 E) 85

16. $8 \oplus 5 = 313$
 $9 \oplus 6 = 315$
 $8 \oplus 4 = 412$ } $\Rightarrow 9 \oplus 8 = ?$

- A) 117 B) 171 C) 217 D) 127 E) 711

1. $8 \blacktriangle 27 = 5$
 $125 \blacktriangle 64 = 9$
 $1 \blacktriangle 216 = 7$
 $1 \blacktriangle 1000 = ?$

- A) 9 B) 10 C) 11 D) 12 E) 13

2. $5 \star (4 \star 5) = 100$
 $6 \star (3 \star 6) = 108$
 $7 \star (2 \star 7) = 98$
 $8 \star (1 \star 8) = ?$

- A) 64 B) 72 C) 80 D) 88 E) 96

3. $4 \cdot 64 = 15$
 $5 \cdot 125 = 24$
 $6 \cdot 216 = 35$
 $7 \cdot 42 = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

4. $\square 36 = 18$ $\bullet 21 = 2$
 $\square 55 = 20$ $\bullet 92 = 18$
 $\bullet (\square 56) = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

5. $\triangle 216 \rightarrow 0$
 $\blacktriangle 98 \rightarrow 72$
 $\triangle (\blacktriangle 512) = ?$

- A) 0 B) 1 C) 2 D) 3 E) 4

6. $2 \blacktriangle 6 = 64$
 $3 \blacktriangle 5 = 243$
 $16 \blacktriangle 0 = 1$
 $6 \blacktriangle 3 = ?$

- A) 6 B) 16 C) 116 D) 216 E) 0

7. $8 \bullet 6 = 40$
 $7 \bullet 5 = 28$
 $12 \bullet 4 = 36$
 $9 \bullet 6 = ?$

- A) 36 B) 45 C) 54 D) 63 E) 92

8. $(6 \blacktriangle 3) \blacktriangle 5 = 14$
 $2 \blacktriangle (15 \blacktriangle 7) = 24$
 $(3 \blacktriangle 5) \blacktriangle (8 \blacktriangle 6) = 22$
 $(5 \blacktriangle 1) \blacktriangle (6 \blacktriangle 2) = ?$

- A) 14 B) 16 C) 18 D) 20 E) 22

9. $\blacktriangle 81 \rightarrow 81$

$\circ 32 \rightarrow 36$

$\blacktriangle (\circ 26) = ?$

- A) 142 B) 121 C) 100 D) 81 E) 64

10. $4 \blacklozenge 3 = 13$

$7 \blacklozenge 4 = 19$

$8 \blacklozenge 5 = 23$

$11 \blacklozenge 6 = ?$

- A) 27 B) 28 C) 29 D) 30 E) 31

11. $\blacktriangle 125 \rightarrow 103$

$\blacksquare 63 \rightarrow 18$

$\blacktriangle [\blacksquare (\blacksquare 77)] = ?$

- A) 14 B) 16 C) 18 D) 20 E) 22

12. $6 \heartsuit 3 = 39$

$8 \heartsuit 5 = 69$

$4 \heartsuit 3 = 19$

$7 \heartsuit 9 = ?$

- A) 50 B) 58 C) 68 D) 90 E) 76

13. $2 \heartsuit 5 = 33$

$4 \heartsuit 8 = 128$

$1 \heartsuit 3 = 10$

$3 \heartsuit 9 = ?$

- A) 0 B) 5 C) 75 D) 108 E) 112

14. $7 \blacksquare 1 = 48$

$6 \blacksquare 2 = 20$

$20 \blacksquare 4 = 144$

$9 \blacksquare 3 = ?$

- A) 0 B) 1 C) 3 D) 5 E) 7

15. $12 \bullet 63 = 27$

$25 \bullet 16 = 49$

$55 \bullet 33 = 60$

$21 \bullet 10 = ?$

- A) 0 B) 1 C) 2 D) 3 E) 4

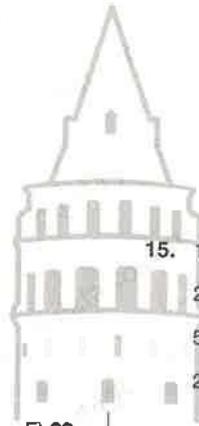
16. $3 \circ 4 = 9$

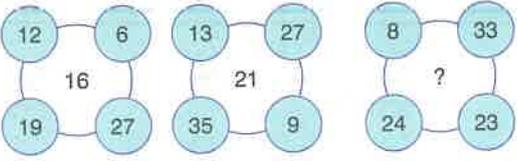
$5 \circ 6 = 125$

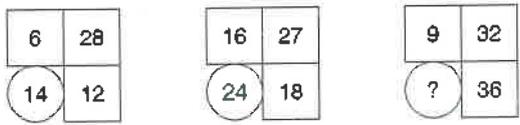
$2 \circ 8 = 16$

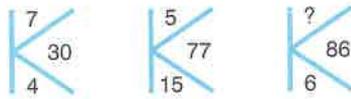
$6 \circ 4 = ?$

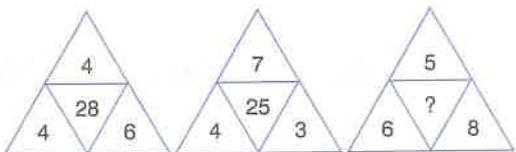
- A) 16 B) 20 C) 26 D) 30 E) 36

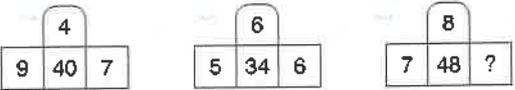


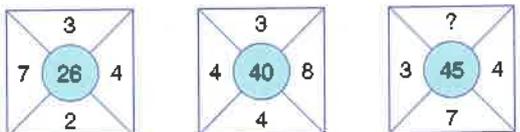
1. 
 A) 17 B) 18 C) 20 D) 22 E) 23

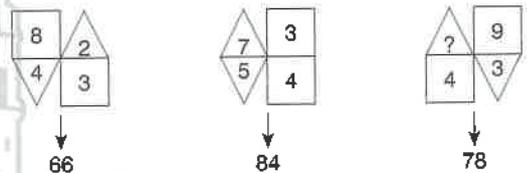
2. 
 A) 8 B) 9 C) 12 D) 16 E) 18

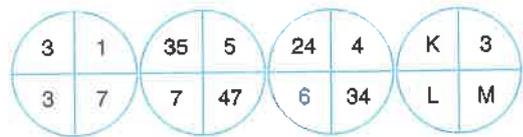
3. 
 A) 6 B) 8 C) 10 D) 12 E) 14

4. 
 A) 38 B) 42 C) 46 D) 48 E) 54

5. 
 A) 5 B) 6 C) 7 D) 8 E) 9

6. 
 A) 3 B) 4 C) 5 D) 6 E) 7

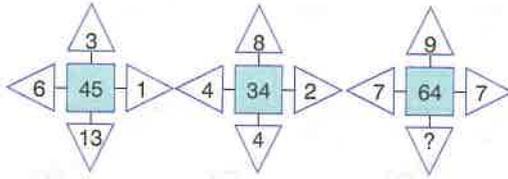
7. 
 A) 2 B) 3 C) 4 D) 5 E) 6

8. 
 K + L + M = ?
 A) 35 B) 39 C) 43 D) 57 E) 61

TEST 1

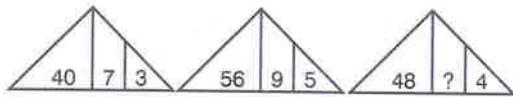
Sayı Bağıntıları / Number Relations

9.



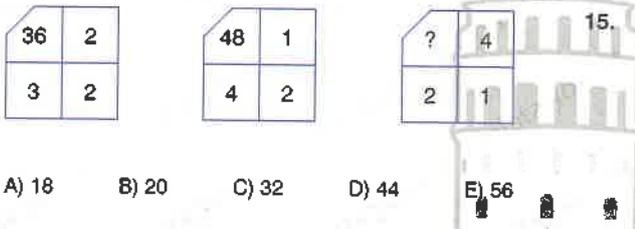
- A) 7 B) 8 C) 9 D) 10 E) 11

10.

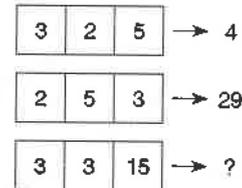


- A) 6 B) 7 C) 8 D) 9 E) 10

11.

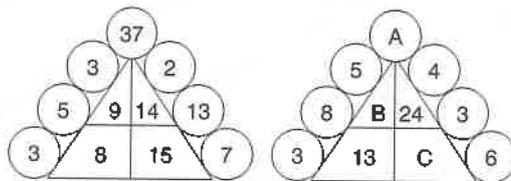


- A) 18 B) 20 C) 32 D) 44 E) 56



- A) 6 B) 9 C) 12 D) 15 E) 18

12.



$$\frac{A}{B-C} = ?$$

- A) 3 B) $\frac{7}{2}$ C) 4 D) $\frac{9}{2}$ E) 5

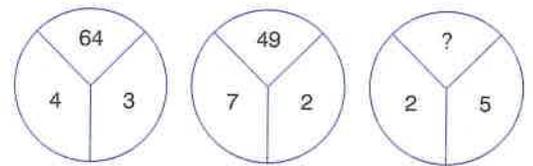
13.

10	12	9	17	28	20	K	L	M
3	6	4	7	13	4	5	6	7

$$K + L + M = ?$$

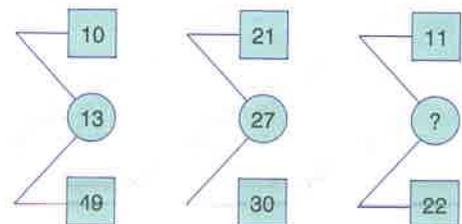
- A) 55 B) 57 C) 59 D) 62 E) 66

14.



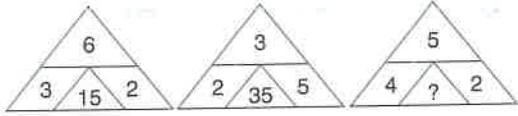
- A) 27 B) 32 C) 36 D) 44 E) 49

16.



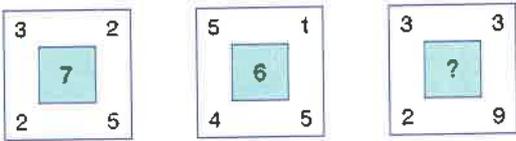
- A) 12 B) 16 C) 25 D) 27 E) 32

1.



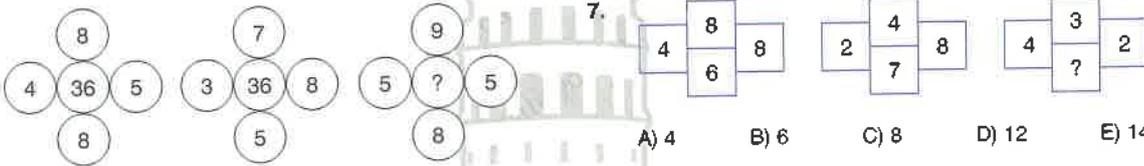
- A) 16 B) 21 C) 25 D) 30 E) 34

2.



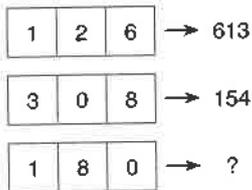
- A) 3 B) 4 C) 5 D) 6 E) 7

3.



- A) 36 B) 38 C) 40 D) 42 E) 44

4.



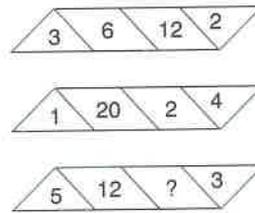
- A) 712 B) 784 C) 820 D) 916 E) 940

5.



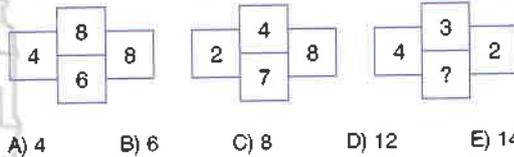
- A) 64 B) 81 C) 88 D) 91 E) 96

6.



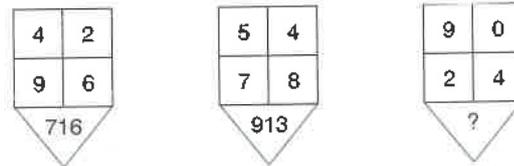
- A) 18 B) 27 C) 30 D) 40 E) 52

7.



- A) 4 B) 6 C) 8 D) 12 E) 14

8.



- A) 125 B) 154 C) 216 D) 250 E) 324

TEST 2

Sayı Bağıntıları / Number Relations

9.

2	4
5	6
4	3

6	4
3	5
7	8

8	6
5	1
3	4
- A) 7 B) 9 C) 11 D) 13 E) 15

10.

12	16
8	12

16	48
24	40

4	30
12	28
- A) 5 B) 6 C) 7 D) 8 E) 9

11.

2	3
18	
4	

3	4
32	
5	

1	5
?	
3	
- A) 20 B) 24 C) 28 D) 30 E) 36

12.

5
6 9
3

3
2 7
3

?
7 9
4
- A) 2 B) 3 C) 4 D) 5 E) 6

13.

39
216 120

84
112 125

?
512 311
- A) 46 B) 58 C) 63 D) 72 E) 85

14.

5	8
8	4

9	4
2	16

18	9
24	18
- A) 6, 12 B) 8, 8 C) 6, 9 D) 8, 12 E) 6, 6

15.

2	2
42	
6	

3	3
81	
2	

4	4
?	
3	
- A) 56 B) 66 C) 72 D) 84 E) 96

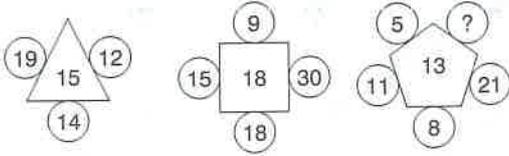
16.

1
4 110 3
2

2
6 165 4
3

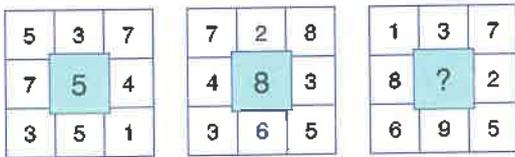
3
5 ? 1
4
- A) 125 B) 136 C) 143 D) 151 E) 164

1.



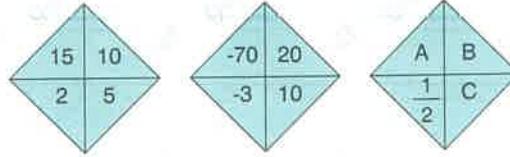
- A) 9 B) 14 C) 20 D) 26 E) 32

2.



- A) 1 B) 3 C) 5 D) 7 E) 9

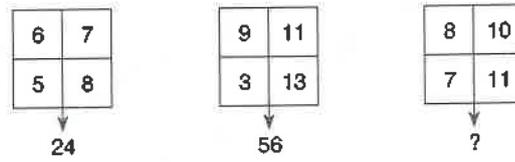
5.



$$A + B + 2C = ?$$

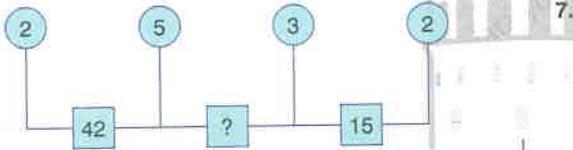
- A) 3 B) 4 C) 5 D) 6 E) 7

6.

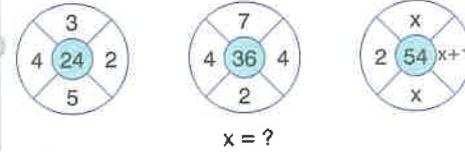


- A) 44 B) 51 C) 58 D) 63 E) 66

3.



- A) 68 B) 76 C) 92 D) 114 E) 140



$$x = ?$$

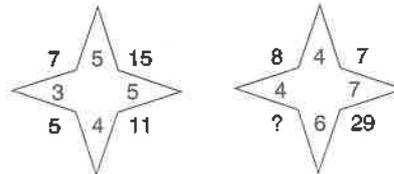
- A) -3 B) -5 C) -6 D) -7 E) -9

4.

525	64
399	60
608	?
284	42
418	54

- A) 62 B) 66 C) 70 D) 74 E) 78

8.

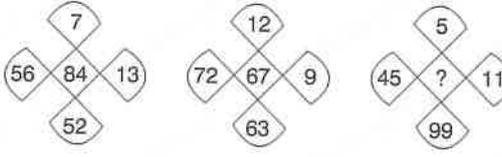


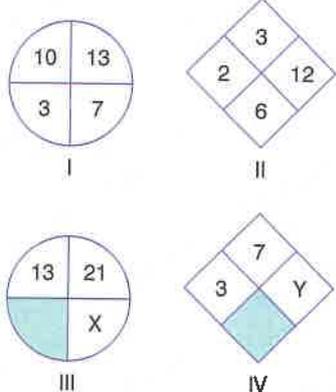
- A) 12 B) 14 C) 16 D) 20 E) 28

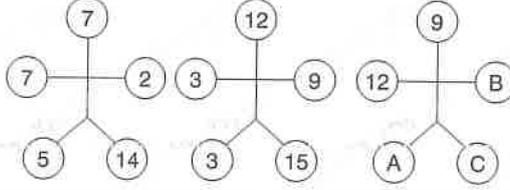
TEST 3

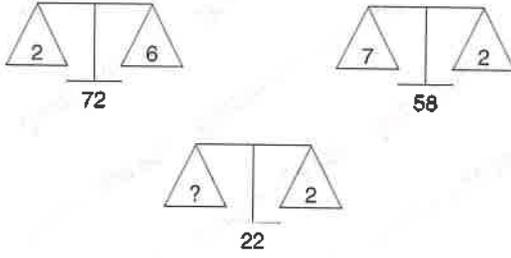
Sayı Bağıntıları / Number Relations

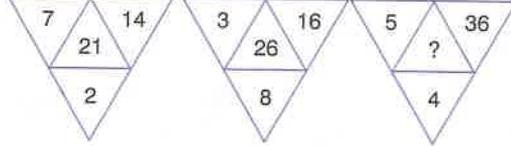
9.  A) 5 B) 6 C) 7 D) 8 E) 9

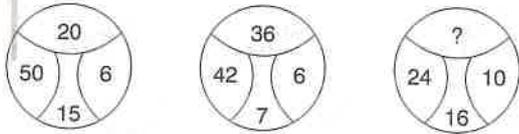
10.  A) 58 B) 65 C) 69 D) 87 E) 99

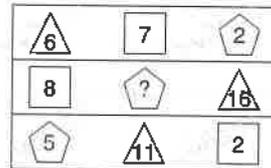
11.  I II III IV
X + Y = ?
A) 47 B) 55 C) 68 D) 74 E) 80

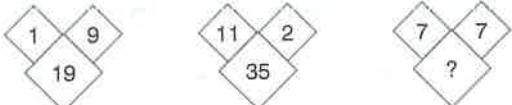
12.  A) 28 B) 30 C) 34 D) 36 E) 42

13.  A) -3 B) -4 C) -5 D) -6 E) -7

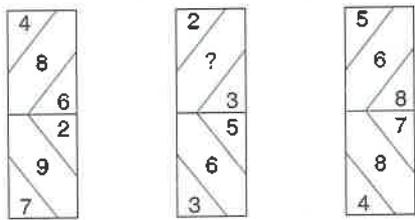
14.  A) 25 B) 29 C) 33 D) 37 E) 41

15.  A) 15 B) 20 C) 24 D) 30 E) 32

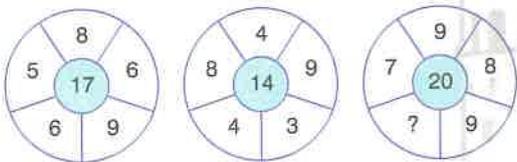
16.  A) 6 B) 9 C) 12 D) 15 E) 16

1. 

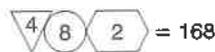
A) 54 B) 56 C) 59 D) 63 E) 65

2. 

A) 5 B) 6 C) 7 D) 8 E) 9

3. 

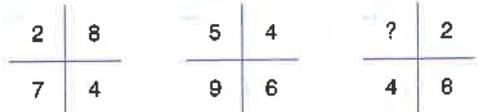
A) 7 B) 8 C) 9 D) 10 E) 11

4. I.  = 168

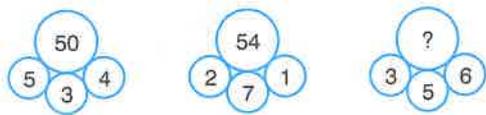
II.  = 142

III.  = ?

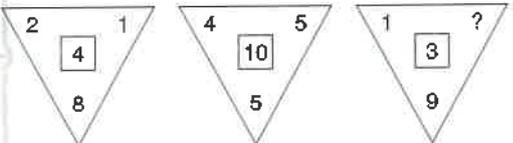
A) 165 B) 406 C) 610 D) 738 E) 916

5. 

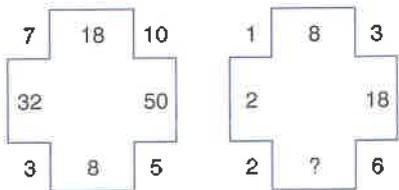
A) 6 B) 5 C) 4 D) 3 E) 2

6. 

A) 58 B) 64 C) 70 D) 82 E) 96

7. 

A) 1 B) 2 C) 3 D) 4 E) 5

8. 

A) 12 B) 18 C) 24 D) 32 E) 48

TEST 4

Sayı Bağıntıları / Number Relations

9.

$A + B + C = ?$

A) 47 B) 53 C) 61 D) 74 E) 80

10.

A) 59 B) 67 C) 76 D) 89 E) 94

11.

A) 7 B) 9 C) 10 D) 11 E) 12

12.

A) 34 B) 42 C) 56 D) 58 E) 64

13.

A) 29 B) 36 C) 45 D) 52 E) 64

14.

A) 16 B) 27 C) 36 D) 72 E) 81

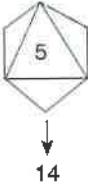
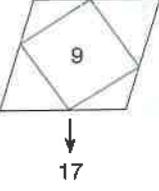
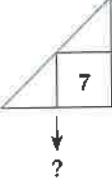
15.

A) 32 B) 49 C) 54 D) 72 E) 98

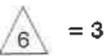
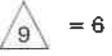
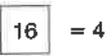
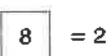
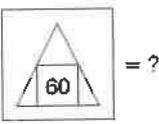
16.

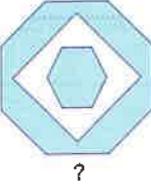
$K + L + M = ?$

A) 50 B) 60 C) 70 D) 80 E) 90

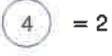
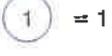
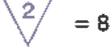
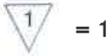
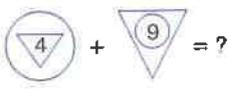
1.   
- A) 13 B) 14 C) 15 D) 16 E) 17

2.    
- A) 24 B) 25 C) 28 D) 30 E) 36

3.     
- A) 2 B) 3 C) 4 D) 5 E) 6

4.   
- A) 54 B) 56 C) 64 D) 65 E) 72

5.    
- A) 17 B) 18 C) 19 D) 20 E) 21

6.     
- A) 27 B) 29 C) 32 D) 35 E) 43

- 7.
- | | | |
|---|---|-------|
|  |  | → 159 |
|  |  | → 912 |
|  |  | → ? |
- A) 166 B) 364 C) 616 D) 1218 E) 1236

- 8.
- | | | | | | |
|---|---|---|---|---|------|
|  | + |  | + |  | = 50 |
|  | + |  | + |  | = 45 |
|  | + |  | + |  | = ? |
- A) 44 B) 49 C) 54 D) 56 E) 60

- 9.
- | | | | |
|---|---|---|---|
|  |  |  |  |
| └───┬───┬───┬───┘ | | | |
|  |  |  | |
| └───┬───┬───┘ | | | |
|  |  | | |
| └───┬───┘ | | | |
|  | | | |
- A) 4 B) 6 C) 8 D) 12 E) 14

- 10.
- | | | |
|---|---|-------|
|  |  | → 916 |
|  |  | → 825 |
|  |  | → 107 |
|  |  | → ? |
- A) 125 B) 369 C) 625 D) 1225 E) 3610

- 11.
- | | | | | | |
|---|---|---|---|---|---------|
|  | + |  | + |  | = 18243 |
|  | + |  | + |  | = 27464 |
|  | + |  | + |  | = ? |
- A) 16276 B) 24936 C) 32816
D) 328136 E) 824336

- 12.
- | | | | | | |
|---|---|---|---|---|------|
|  | + |  | + |  | = 30 |
|  | + |  | + |  | = 24 |
|  | + |  | + |  | = ? |
- A) 25 B) 27 C) 32 D) 34 E) 36

1.

A) 16 B) 27 C) 32 D) 36 E) 64

2.

A) 168164 B) 329632 C) 368164
D) 649128 E) 648132

3.

A) 8 B) 10 C) 12 D) 14 E) 16

4.

A) 92 B) 94 C) 96 D) 98 E) 100

5.

A) 34 B) 40 C) 44 D) 48 E) 52

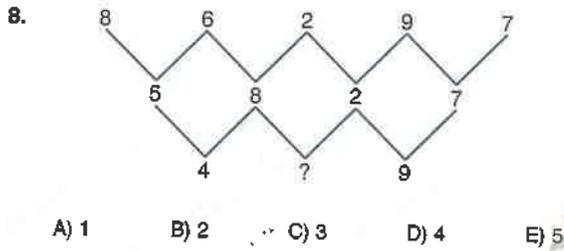
6.

A) 55 B) 66 C) 77 D) 88 E) 99

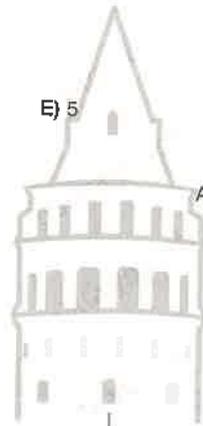
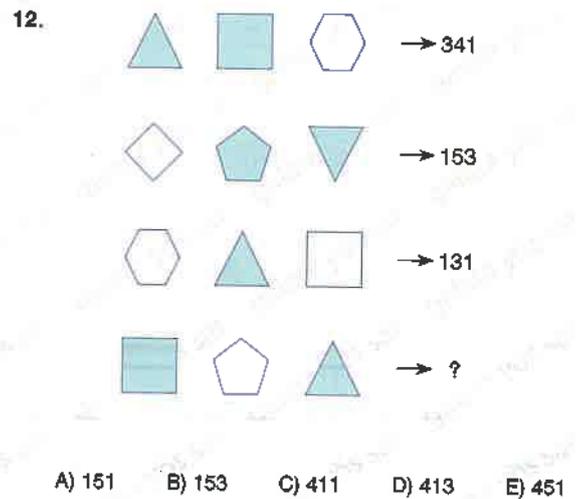
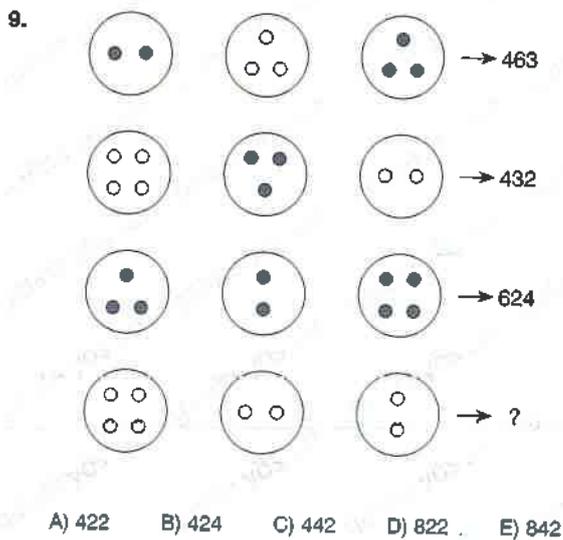
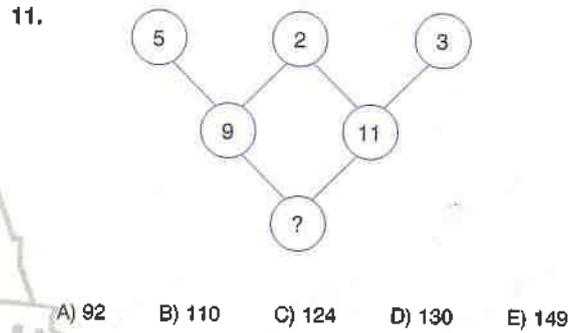
TEST 6

Sayı Bağıntıları / Number Relations

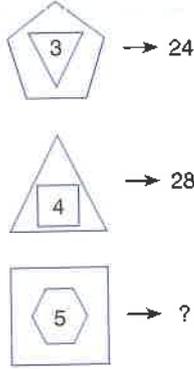
7. $\square + \text{pentagon} \div \triangle = 20$
 $\nabla \times \square - \text{pentagon} = ?$
 A) 72 B) 84 C) 96 D) 108 E) 128



10. $\text{7-pointed star} - \text{5-pointed star} + \text{4-pointed star} = 27$
 $\text{5-pointed star} - \text{7-pointed star} \div \text{3-pointed star} = ?$
 A) 12 B) 15 C) 18 D) 21 E) 24

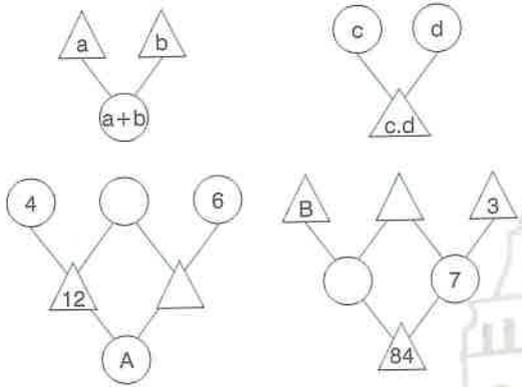


1.



- A) 35 B) 42 C) 48 D) 50 E) 52

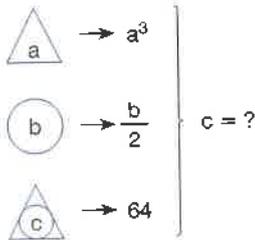
2.



A - B = ?

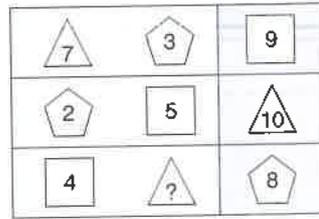
- A) 14 B) 18 C) 22 D) 26 E) 30

3.



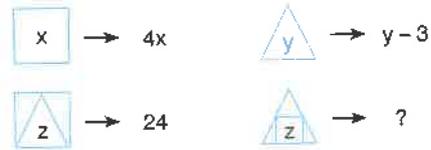
- A) 2 B) 4 C) 6 D) 8 E) 12

4.



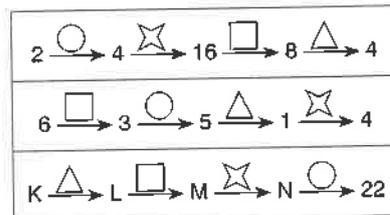
- A) 4 B) 5 C) 6 D) 7 E) 8

5.



- A) 25 B) 28 C) 33 D) 36 E) 42

6.



$\sqrt{K + L + M + N} = ?$

- A) 8 B) 7 C) 6 D) 5 E) 4

7.

 $\rightarrow x^2$  $\rightarrow 2y$

 $-$  $= ?$

- A) 53 B) 55 C) 62 D) 65 E) 71

8.

 $\rightarrow c^3$
 $\rightarrow 5^b$
 $\rightarrow 25^a$

} $a = ?$

- A) 3 B) 4 C) 5 D) 6

9.

 $\rightarrow 2x$  $\rightarrow x - 12$

 $= 4 \cdot$ 
 $x = ?$

- A) 9 B) 13 C) 14 D) 16 E) 18

10.

   $\rightarrow 30 = 1^2 + 2^1 + 3^0$

   $\rightarrow ?$

- A) 18 B) 21 C) 24 D) 27 E) 30

11.

   $\rightarrow 34 = 7 \cdot 1 + 6 \cdot 2 + 5 \cdot 3$

   $\rightarrow 42$

$x = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9

12.

   $\rightarrow 3 = 1^3 + 3^2 + (-7)^1$

   $=$   

$x = ?$

- A) 2 B) 3 C) -4 D) -5 E) -6

1. I. = $5x + y^2 + \frac{z}{3}$

II. = ?

A) 54 B) 59 C) 63 D) 67 E) 72

2. I. = $(x \cdot y \cdot z)^2$

II. = ?

A) 64 B) 144 C) 196 D) 256 E) 324

3. → = 4

= ?

A) 8 B) 10 C) 12 D) 15 E) 16

4. → = 175

= ?

A) 2 B) 3 C) 4 D) 6 E) 9

5. I. = $\frac{a}{2} + \sqrt{b} + \frac{1}{c}$

II. = ?

A) 3 B) 4 C) 6 D) 9 E) 12

6. I. = $3a + b^2 + \frac{c}{2}$

II. = $a^2 - 3b$

III. = ?

A) 18 B) 24 C) 30 D) 36 E) 42

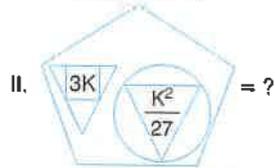
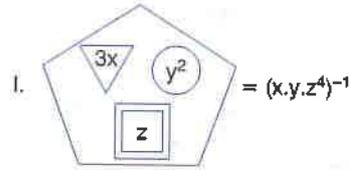
7. I. → $a^2 + \frac{1}{b} + c$

II. → 16

III. → ?

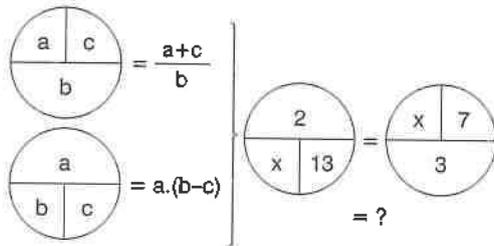
A) 2 B) 3 C) 4 D) 5 E) 6

8.



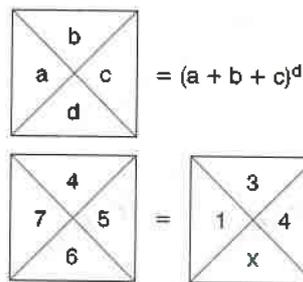
- A) $\frac{1}{3K^3}$ B) $\frac{K^3}{3}$ C) $3K^3$ D) $\frac{3}{K^3}$ E) $\frac{1}{K^3}$

9.



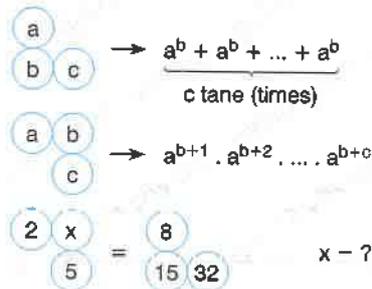
- A) 10 B) 14 C) 15 D) 17 E) 19

10.



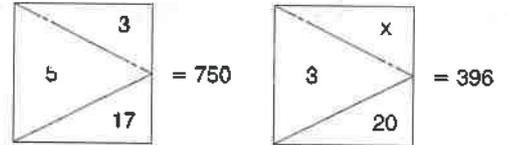
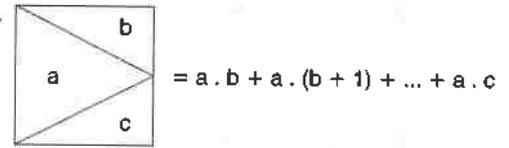
- A) 14 B) 12 C) 10 D) 9 E) 8

11.



- A) 5 B) 6 C) 7 D) 8 E) 9

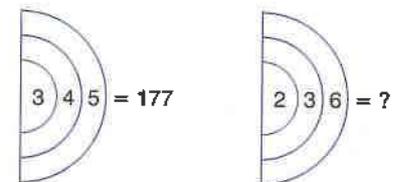
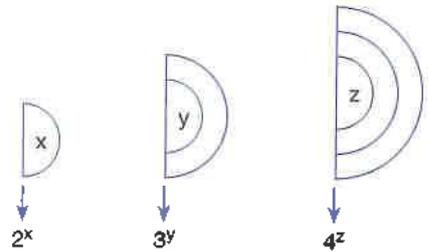
12.



x = ?

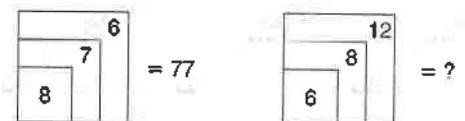
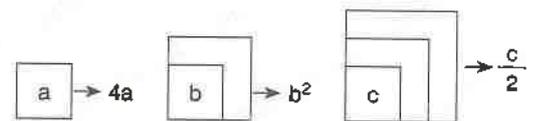
- A) 11 B) 12 C) 13 D) 14 E) 15

13.



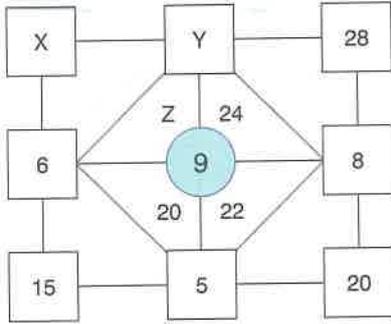
- A) 89 B) 107 C) 113 D) 124 E) 135

14.



- A) 122 B) 115 C) 98 D) 85 E) 79

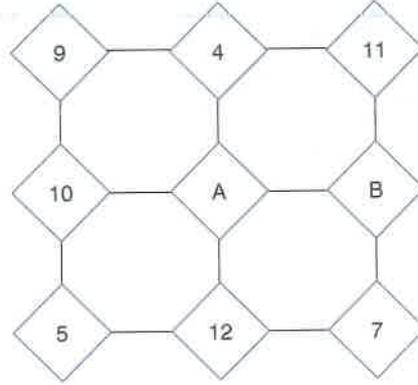
1.



$X + Y + Z = ?$

- A) 40 B) 50 C) 60 D) 70 E) 80

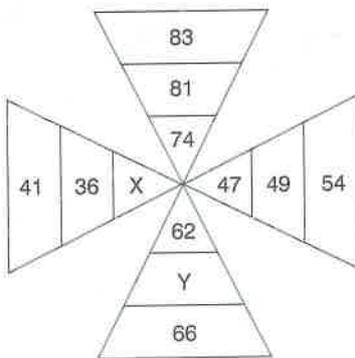
3.



$2A - B = ?$

- A) 10 B) 11 C) 12 D) 13 E) 14

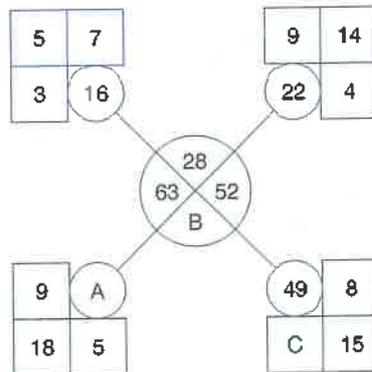
2.



$X - Y = ?$

- A) 13 B) 16 C) 19 D) 22 E) 25

4.



$A + B + C = ?$

- A) 131 B) 138 C) 145 D) 152 E) 159

TEST 9

Sayı Bağıntıları / Number Relations

5.

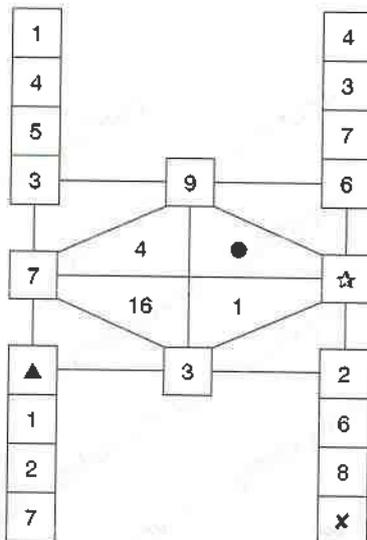
I		
4	3	7
2	2	4
8	6	2
4	4	1

II		
a	4	8
5	2	b
6	3	3
8	c	4

$$\sqrt{a + b + c} = ?$$

- A) 2 B) 3 C) 4 D) 5 E) 6

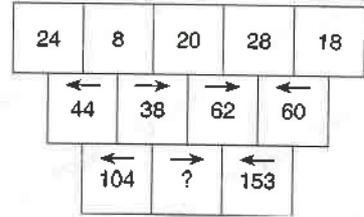
6.



$$\bullet - ☆ + X - \blacktriangle = ?$$

- A) 10 B) 15 C) 20 D) 25 E) 30

7.



- A) 119 B) 123 C) 127 D) 131 E) 135

8.

3	6	1
5	3	4
7	2	5

5	8	3
7	5	6
9	4	7

7	5	6
9	4	7
5	8	3

4	2	7
1	6	5
3	5	2

A)

4	9	6
8	7	3
7	4	5

 B)

9	6	4
7	3	8
4	5	7

 C)

6	3	5
4	8	7
9	7	4

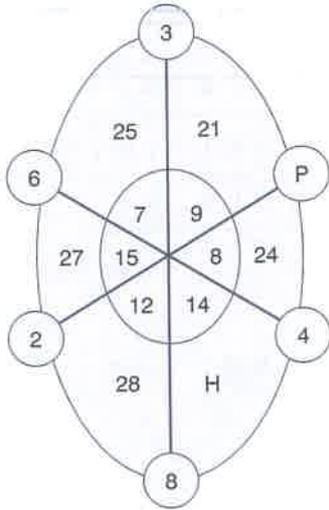
D)

6	5	9
7	8	4
4	7	9

 F)

3	8	7
5	7	4
6	4	9

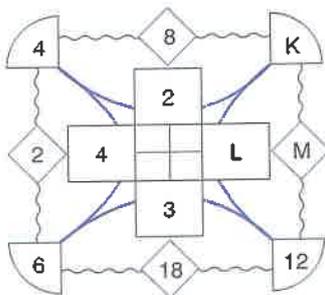
1.



$P + H = ?$

- A) 30 B) 40 C) 50 D) 60 E) 70

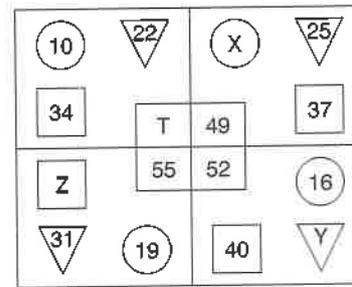
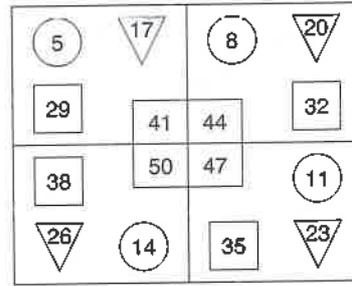
2.



$K + L + M = ?$

- A) 22 B) 24 C) 26 D) 28 E) 30

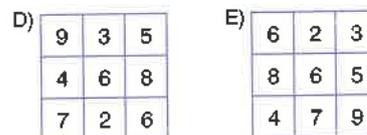
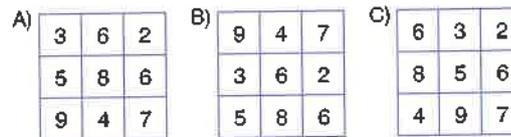
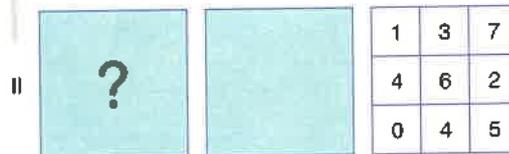
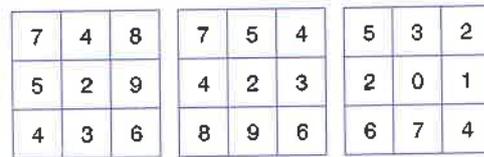
3.



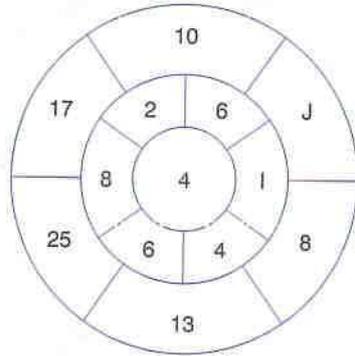
$X + Y + Z + T = ?$

- A) 110 B) 120 C) 130 D) 140 E) 150

4.



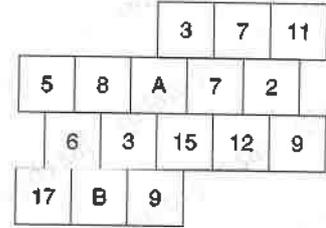
5.



$J + J = ?$

- A) 14 B) 17 C) 21 D) 25 E) 32

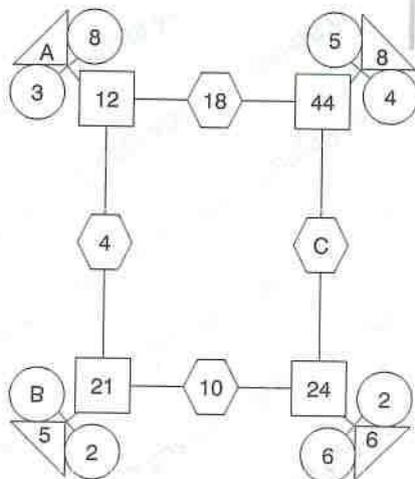
7.



$A + B = ?$

- A) 16 B) 18 C) 24 D) 26 E) 32

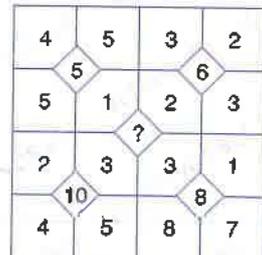
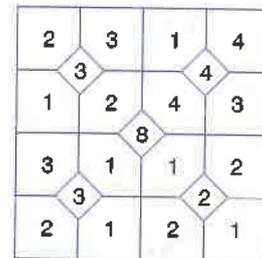
6.



$A + B + C = ?$

- A) 32 B) 34 C) 44 D) 46 E) 50

8.



- A) 40 B) 50 C) 60 D) 70 E) 80

1.

7		5		1
	3		8	
4		A		6
	1		6	
2		7		9

	12		6	
		11		
	6		8	
		7		
	9		B	

III

		18		
		11		
		14		
		7		
		C		

$A + B + C = ?$

- A) 37 B) 43 C) 51 D) 55 E) 62

3.

4		3		2	
	2		4		1
1		3		5	
	2		4		6
5		1		3	
	4		2		5

II

5		6		7	
	K		8		7
6		4		8	
	6		6		L

III

	30		42	
		M		56
	24		32	
		36		N

$K + L + M + N = ?$

- A) 105 B) 107 C) 109 D) 111 E) 113

2.

5				
	4			
1		7		
	2		6	
3		X		8
	1		4	
2		3		5

II

5				
	8			
3		Y		
	2		24	
6		6		40

III

15				
	16			
18		Z	24	
				40

$X + Y + Z = ?$

- A) 80 B) 90 C) 100 D) 110 E) 120

4.

3		6		2
	8		4	
5		2		7
	3		9	
8		1		6

II

	18		12	
		A		
	10		14	
		27		
	B		6	

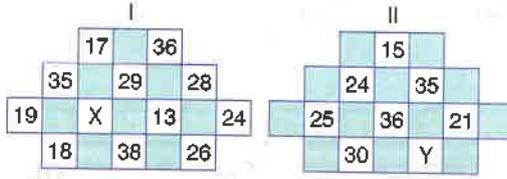
III

	28		26	
		C		
	D		20	

$A + B - C + D = ?$

- A) -3 B) -1 C) 0 D) 2 E) 4

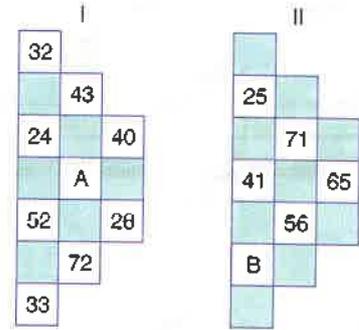
5.



$$X + Y = ?$$

- A) 40 B) 50 C) 60 D) 70 E) 80

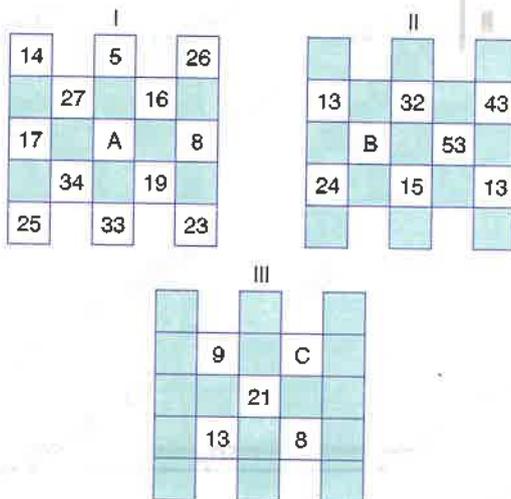
7.



$$A - B = ?$$

- A) 13 B) 15 C) 17 D) 19 E) 21

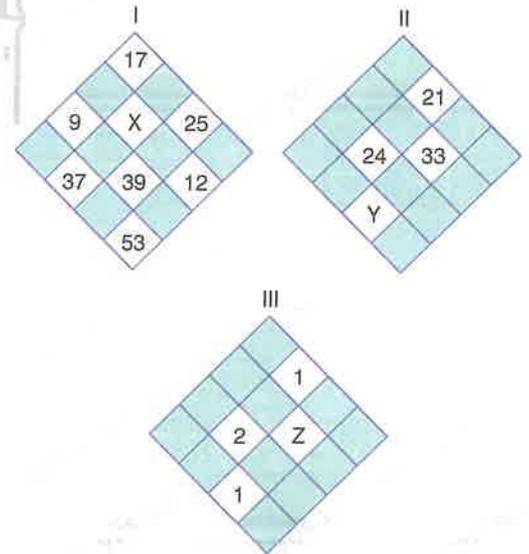
6.



$$A - B + C = ?$$

- A) 10 B) 16 C) 20 D) 24 E) 32

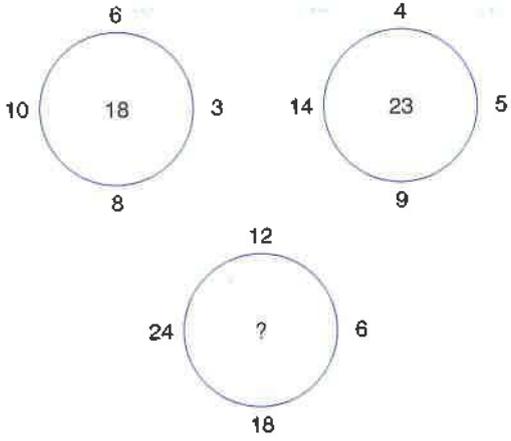
6.



$$X + Y + Z = ?$$

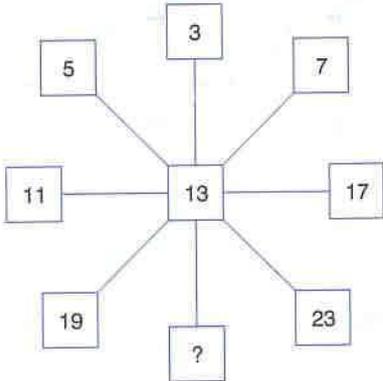
- A) 100 B) 99 C) 98 D) 97 E) 96

1.



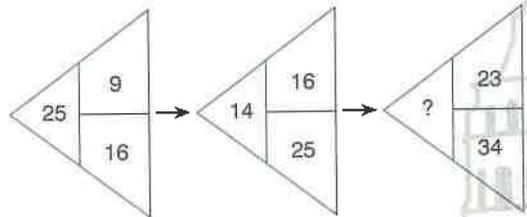
A) 15 B) 28 C) 32 D) 40 E) 42

4.



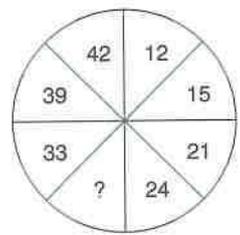
A) 25 B) 27 C) 29 D) 31 E) 33

2.



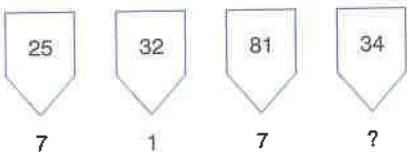
A) 3 B) 5 C) 7 D) 8 E) 10

5.



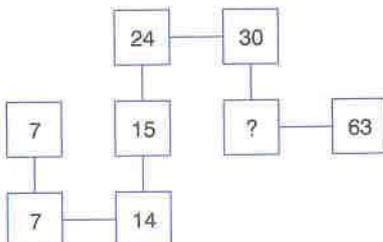
A) 27 B) 28 C) 30 D) 31 E) 32

3.



A) 8 B) 11 C) 14 D) 17 E) 22

6.



A) 16 B) 18 C) 20 D) 28 E) 33

1 - E

2 - A

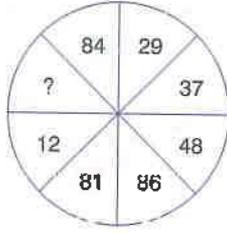
3 - D

4 - C

5 - C

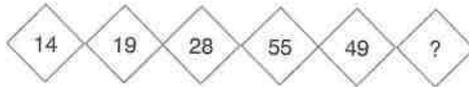
6 - B

7.



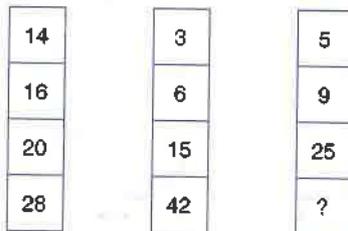
- A) 17 B) 21 C) 23 D) 34 E) 42

8.



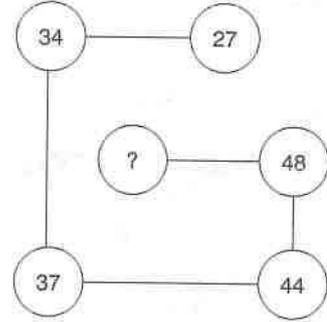
- A) 56 B) 62 C) 77 D) 81 E) 93

9.



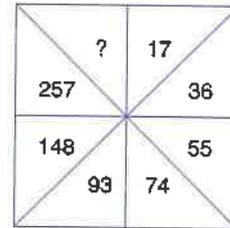
- A) 64 B) 72 C) 77 D) 81 E) 89

10.



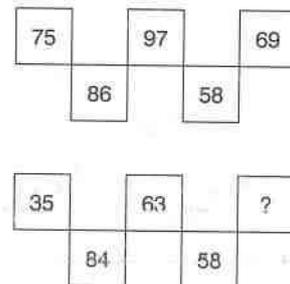
- A) 51 B) 54 C) 56 D) 59 E) 60

11.



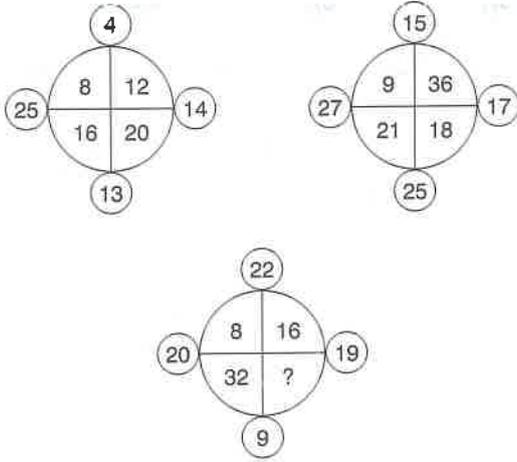
- A) 518 B) 637 C) 709 D) 816 E) 911

12.



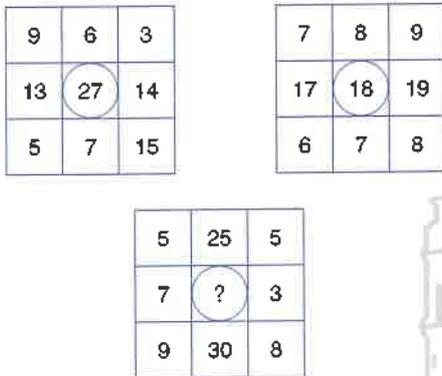
- A) 34 B) 46 C) 65 D) 73 E) 87

1.



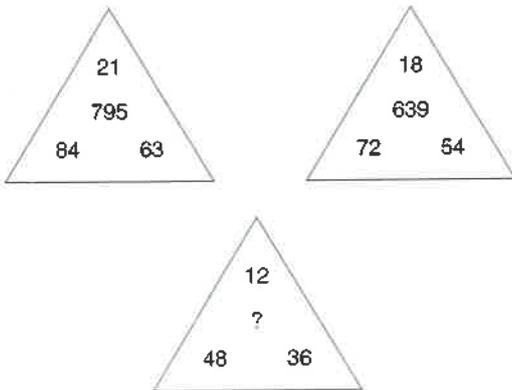
A) 10 B) 14 C) 16 D) 18 E) 20

2.



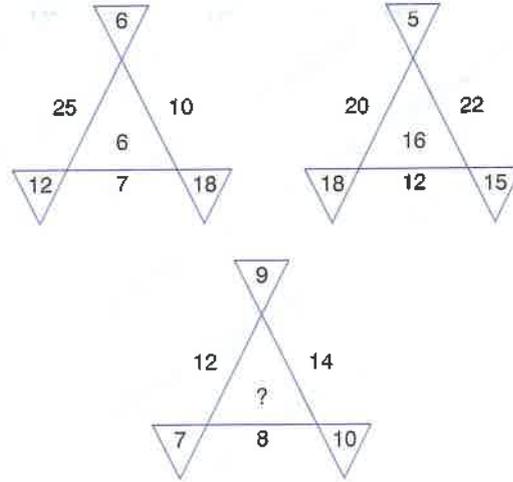
A) 17 B) 22 C) 29 D) 33 E) 38

3.



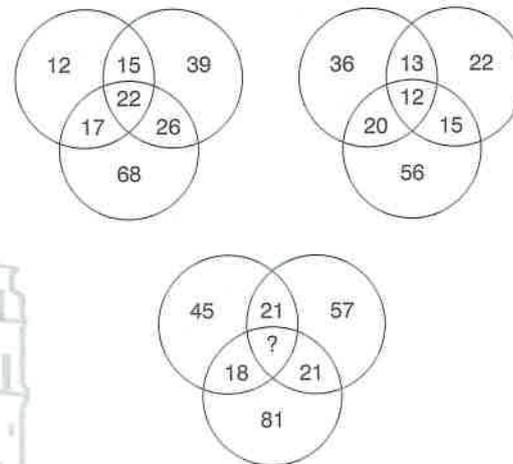
A) 756 B) 819 C) 837 D) 975 E) 999

4.



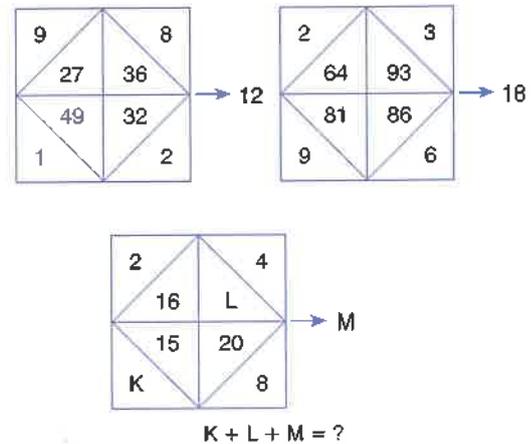
A) 7 B) 8 C) 11 D) 19 E) 22

5.



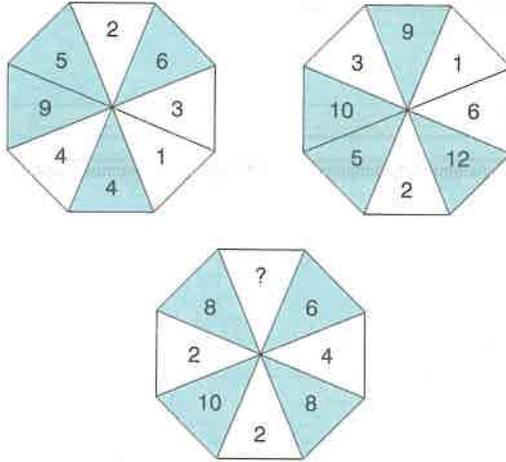
A) 15 B) 17 C) 20 D) 23 E) 25

6.



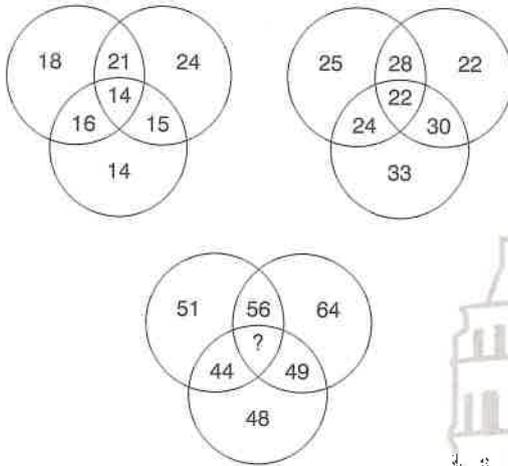
A) 18 B) 20 C) 22 D) 24 E) 25

7.



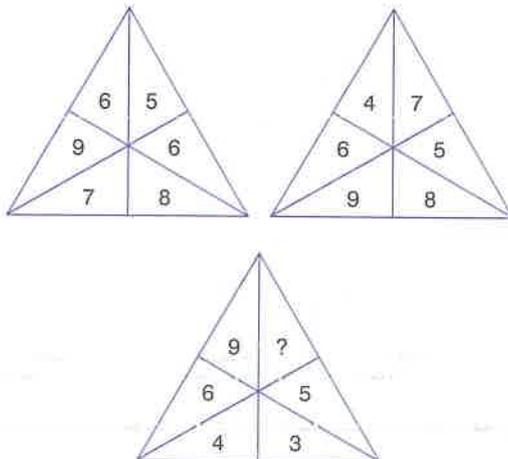
- A) 2 B) 3 C) 4 D) 5 E) 6

8.



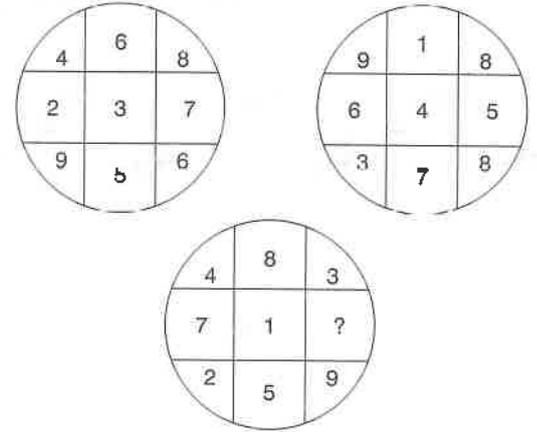
- A) 44 B) 48 C) 49 D) 56 E) 64

9.



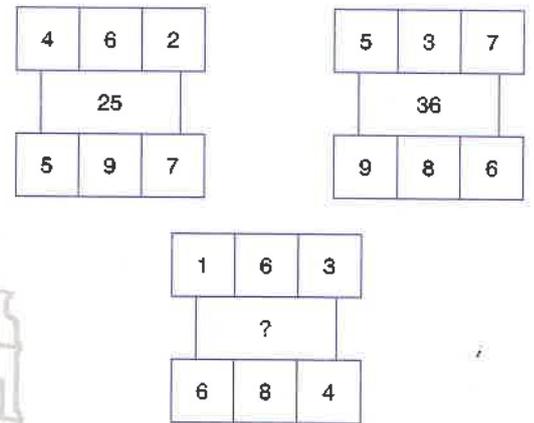
- A) 1 B) 2 C) 3 D) 4 E) 5

10.



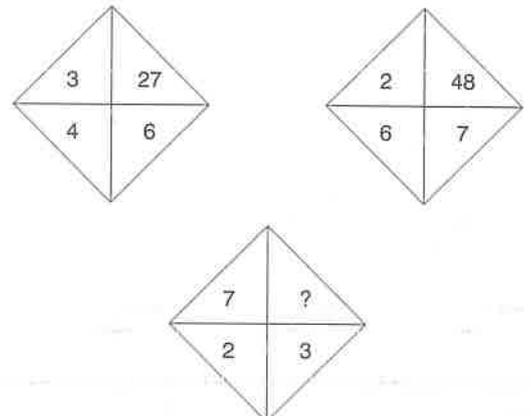
- A) 6 B) 5 C) 4 D) 3 E) 2

11.



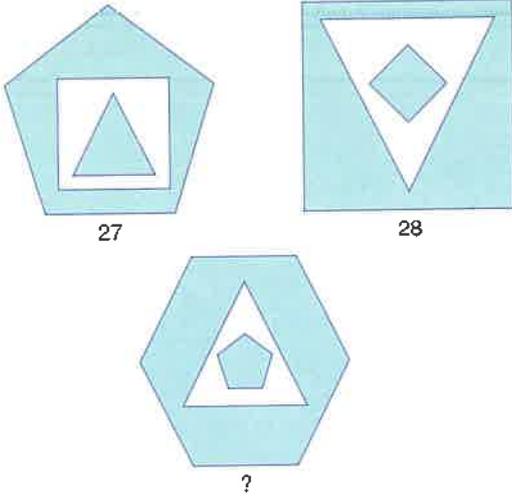
- A) 14 B) 28 C) 36 D) 38 E) 64

12.



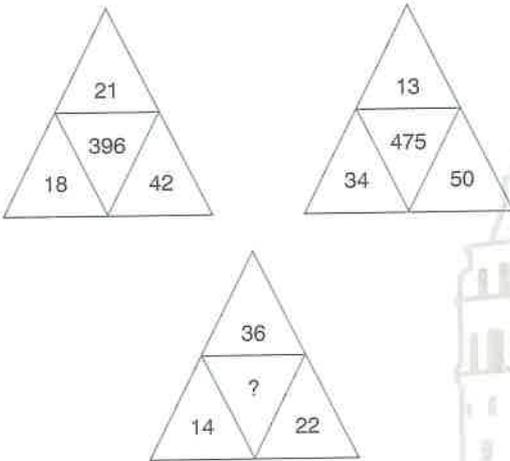
- A) 18 B) 21 C) 24 D) 27 E) 32

1.



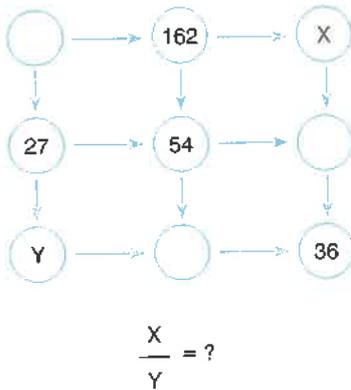
- A) 32 B) 36 C) 45 D) 48 E) 54

2.



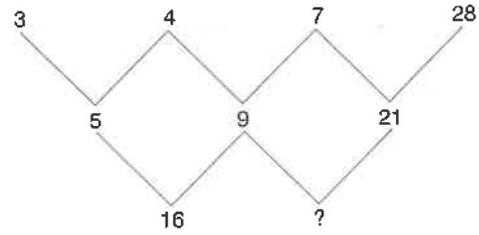
- A) 825 B) 867 C) 954 D) 975 E) 986

3.



- A) 6 B) 9 C) 18 D) 27 E) 36

4.



- A) 30 B) 40 C) 50 D) 60 E) 70

5. x, y, z, t ve a pozitif tam sayılardır.

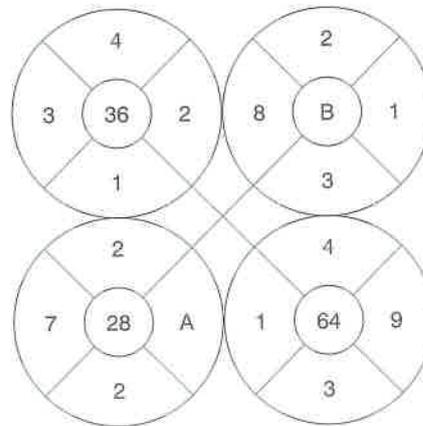
x, y, z, t and a positive integers.

$$\begin{array}{cc} + & x \\ \downarrow & \downarrow \\ \begin{array}{|c|c|} \hline x & y \\ \hline \end{array} & = a \\ + \rightarrow & \begin{array}{|c|c|} \hline z & t \\ \hline \end{array} = a \\ = & = \\ a & a \end{array}$$

$a = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

6.



$A + B = ?$

- A) 48 B) 52 C) 65 D) 72 E) 80

7.

A) 2 B) 3 C) 4 D) 6 E) 9

8.

A) 9 B) 10 C) 12 D) 15 E) 18

9.

$$= (2^a + 2^b)c - (2^a - 2^b)c$$

$$= \frac{1}{2}$$

$x + y = ?$

A) -4 B) -3 C) 2 D) 3 E) 4

10.

32	?	16	?	8	?	4	?	2	=	32
----	---	----	---	---	---	---	---	---	---	----

A) - + + x
 B) + : : x :
 C) ÷ + x -
 D) - ÷ x +
 E) + x + -

11.

A) 18 B) 22 C) 27 D) 34 E) 39

12.

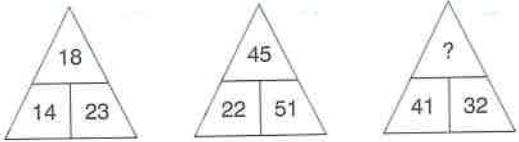
i. $= \frac{a^3 + 3b + 5c}{4}$

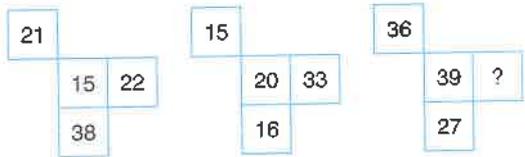
ii. $= 3a - b^3$

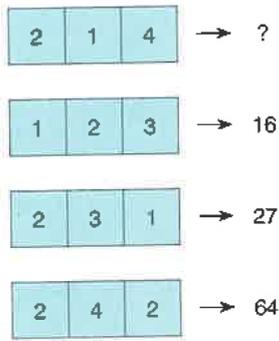
iii. $= ?$

A) 8 B) 9 C) 12 D) 15 E) 16



1. 
- A) 36 B) 42 C) 49 D) 54 E) 56

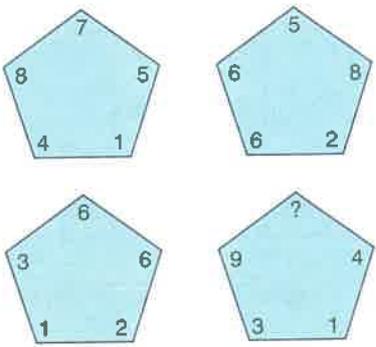
2. 
- A) 49 B) 57 C) 74 D) 81 E) 96

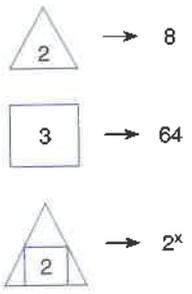
3. 
- A) 4 B) 6 C) 8 D) 14 E) 16

4.

9	8	2	7
7	3	5	8
4	A	B	9

 $A + B = ?$
- A) 9 B) 10 C) 12 D) 14 E) 16

5. 
- A) 5 B) 6 C) 7 D) 8 E) 9

6. 
- $x = ?$
- A) 10 B) 12 C) 14 D) 16 E) 18

7.

I. $\boxed{a^3} = a^2 - 1$

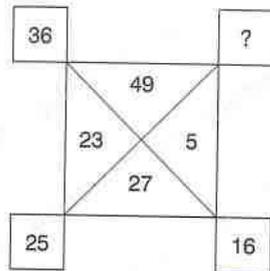
II. $\bigcirc 5b = b^b$

III. $\bigcirc x = 27$

$x = ?$

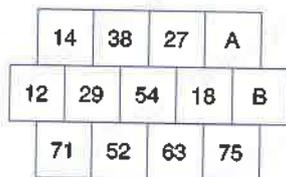
- A) 8 B) 25 C) 36 D) 49 E) 64

8.



- A) 27 B) 18 C) 15 D) 11

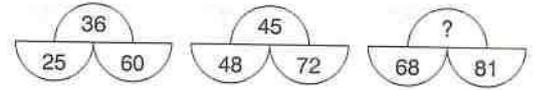
9.



$B - A = ?$

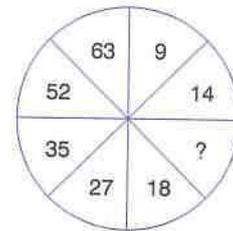
- A) 24 B) 27 C) 32 D) 36 E) 43

10.



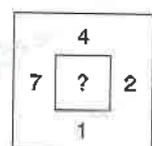
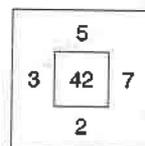
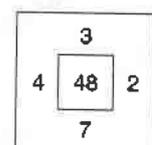
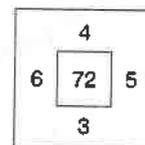
- A) 19 B) 27 C) 38 D) 42 E) 54

11.

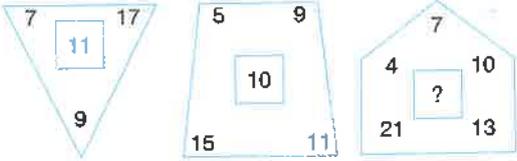


- A) 12 B) 13 C) 14 D) 15 E) 16

12.



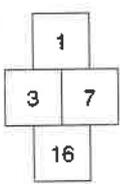
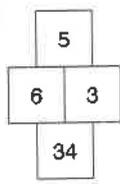
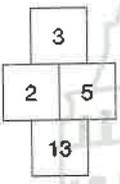
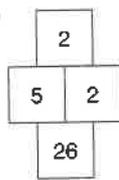
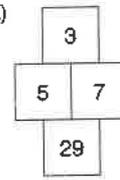
- A) 35 B) 49 C) 51 D) 55 E) 63

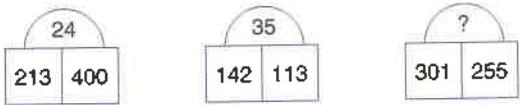
1. 
- A) 9 B) 10 C) 11 D) 12 E) 13

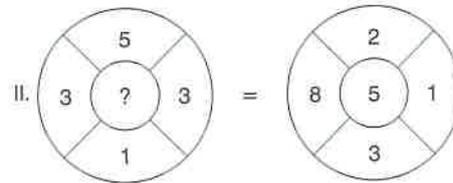
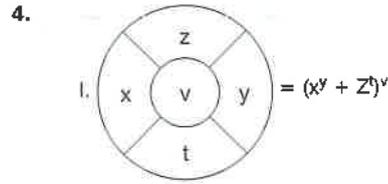


Aşağıdakilerden hangisi yukarıdaki şekilde verilen kurala uygundur?

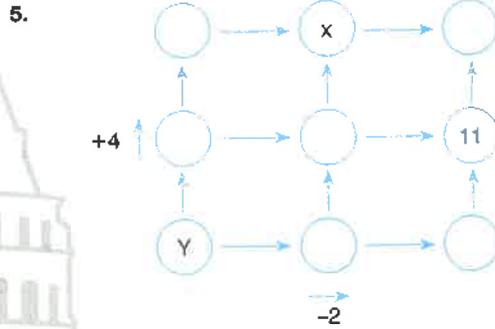
Which one of the following figures does have the same accordance between its number with the figure above?

- A)  B)  C) 
- D)  E) 

3. 
- A) 28 B) 32 C) 36 D) 45 E) 48

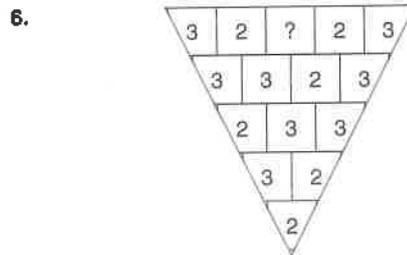


- A) 2 B) 3 C) 4 D) 5 E) 6



$X + Y = ?$

- A) 22 B) 26 C) 28 D) 32 E) 34



- A) 5 B) 4 C) 3 D) 2 E) 1

7.

I.

6			6
2	3	3	

II.

13			15
3	8	5	

III.

A			B
4	5	7	

$$B - A = ?$$

- A) 5 B) 8 C) 14 D) 16 E) 22

8.

64	3	6	2
?	8	9	1
72	1	9	7
81	2	5	4

- A) 63 B) 68 C) 76 D) 84 E) 88

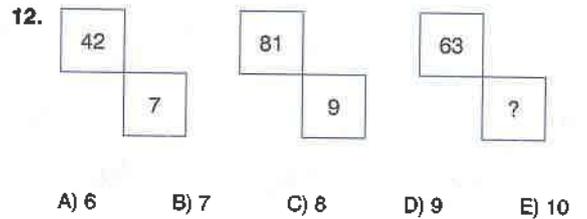
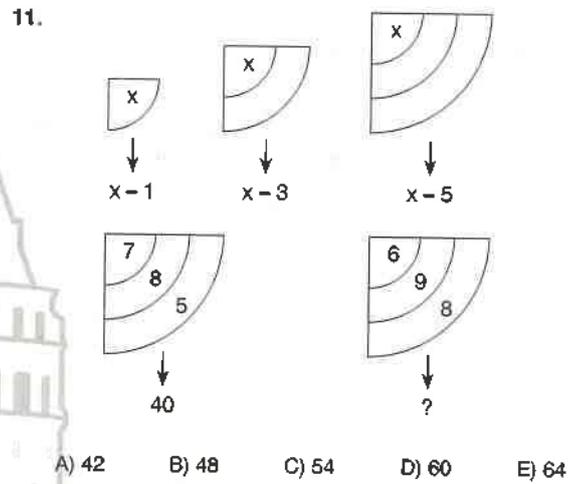
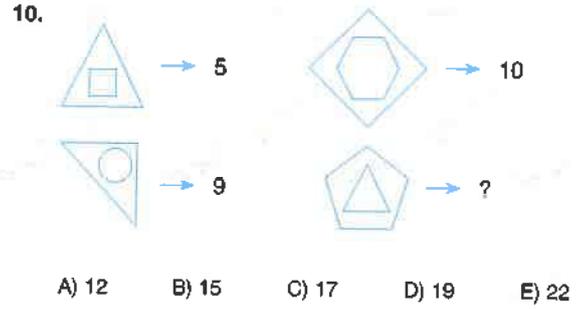
9.

2	4	÷	3	+	4	x	1	1	=	4	8	+	8	x	6
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

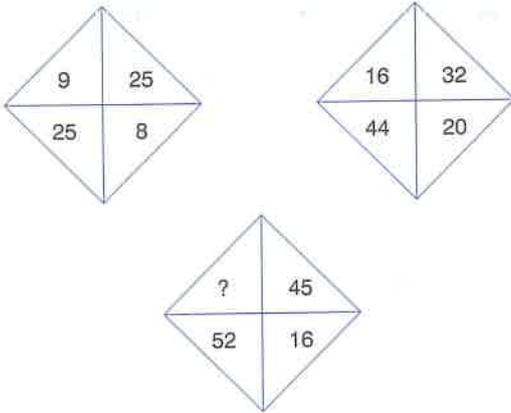
Yukarıdaki eşitliğin sağlanması için hangi kutu çıkartılmalıdır?

Which box must be removed in order to obtain correct equality?

- A) 3 B) 8 C) 11 D) 12 E) 15

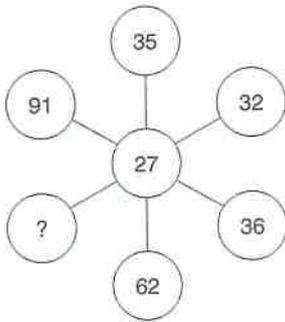


1.



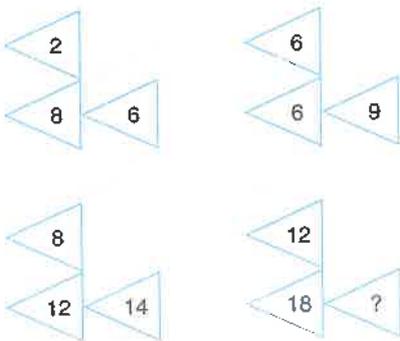
- A) 20 B) 27 C) 36 D) 42 E) 44

2.



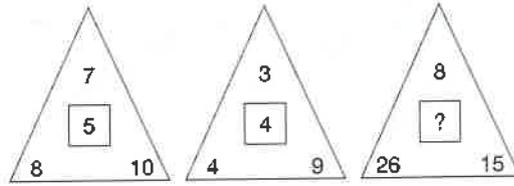
- A) 49 B) 57 C) 64 D) 73

3.



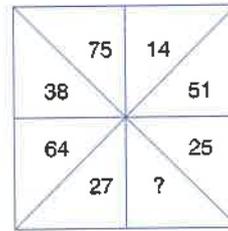
- A) 15 B) 18 C) 21 D) 24 E) 27

4.



- A) 5 B) 6 C) 7 D) 8 E) 9

5.



- A) 68 B) 44 C) 36 D) 28 E) 25

6.

I. $\boxed{49} = 62$ II. $\boxed{74} = 85$
 III. $\boxed{17} = 25$ IV. $\boxed{?} = 49$

- A) 25 B) 29 C) 33 D) 38 E) 46

7.

9

25	41
23	16

15

14

51	27
40	33

11

X

18	44
16	81

Y

X + Y = ?

A) 27 B) 33 C) 39 D) 45 E) 51

10.

I. $\square 6 \rightarrow 3$

II. $\triangle 6 \rightarrow 2$

III. $\square 15 \rightarrow K$

IV. $\triangle 15 \rightarrow L$

K + L = ?

A) 7 B) 8 C) 9 D) 10 E) 11

8.

2	14
3	5

1	12
4	2

4	43
2	?

A) 3 B) 4 C) 5 D) 6 E) 7

11.

?	12	36
16	15	9
49	18	42

A) 34 B) 37 C) 43 D) 45 E) 51

9.

I. $\begin{matrix} \triangle 3a & \circ \frac{1}{b} \\ \diamond \frac{c}{4} \end{matrix} = \frac{1}{a+b+c}$

II. $\begin{matrix} \circ 6 & \triangle 1 \\ \diamond \frac{1}{8} \end{matrix} = ?$

A) $\frac{1}{3}$ B) 1 C) $\frac{1}{2}$ D) 2 E) $\frac{2}{3}$

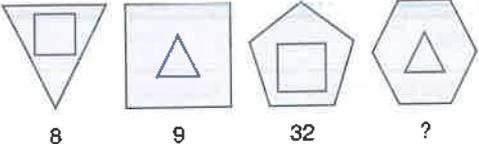
12.

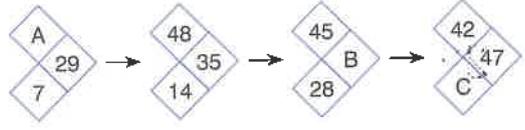
36	49	28
----	----	----

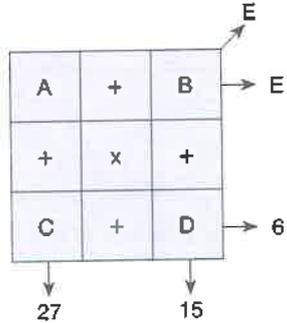
28	?	42
----	---	----

32	58	35
----	----	----

A) 46 B) 51 C) 54 D) 67 E) 73

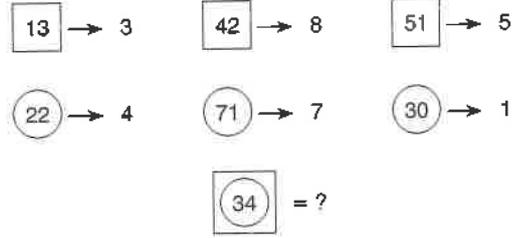
1. 
8 9 32 ?
- A) 12 B) 16 C) 24 D) 27 E) 36

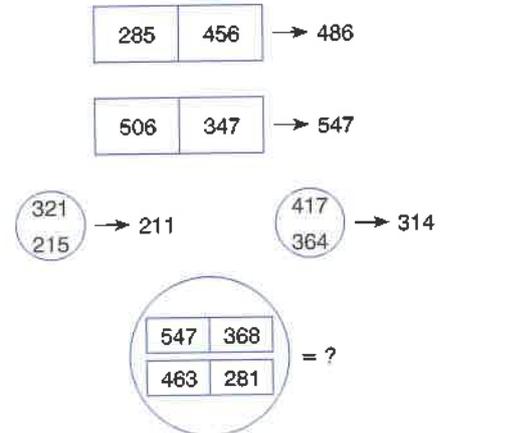
2. 
 $A - B + C = ?$
- A) 22 B) 33 C) 44 D) 55 E) 66

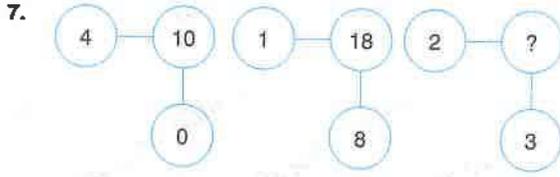
3. 
A, B, C, D ve E pozitif sayılar olduğuna göre, A + E değeri kaçtır?
What is the value of A + E, if A, B, C, D and E are positive numbers?
- A) 50 B) 55 C) 60 D) 65 E) 70

4.

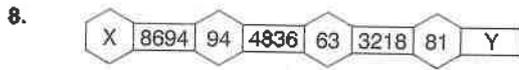
2	1	2	3
6	2	3	7
4	?	3	5
2	4	4	6
- A) 0 B) 1 C) 2 D) 3 E) 4

5. 
A) 4 B) 6 C) 7 D) 8 E) 9

6. 
A) 241 B) 368 C) 463 D) 468 E) 587

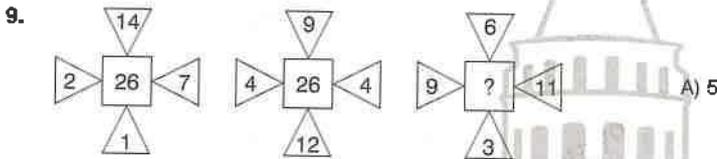


- A) 46 B) 54 C) 69 D) 76 E) 89



$$X - Y = ?$$

- A) 15 B) 13 C) 11 D) 9 E) 7



- A) 22 B) 24 C) 26 D) 27 E) 29

10.

24	20
32	13
38	73
62	40
A	B

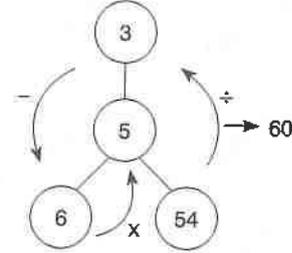
$$A - B = ?$$

- A) 6 B) 7 C) 8 D) 9 E) 10

Aşağıdaki örneğe göre 11 ve 12. soruları cevaplayınız.

Answer questions 11 and 12 according to the example below.

Örnek (Example):



$$54 \div 3 = 18$$

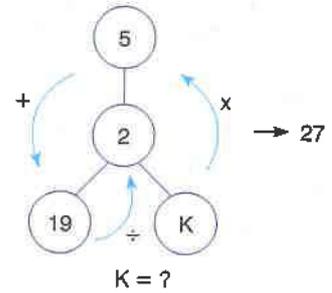
$$18 - 6 = 12$$

$$12 \times 5 = 60$$

Sonuç: 60

(Result)

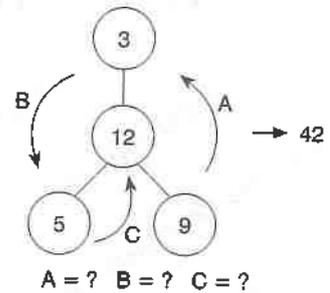
11.



$$K = ?$$

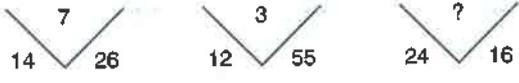
- A) 5 B) 6 C) 7 D) 8 E) 9

12.

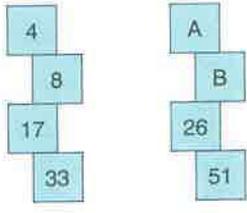


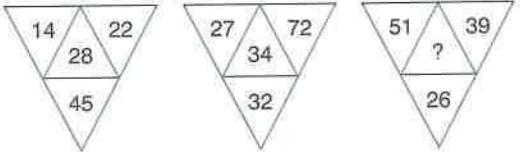
$$A = ? \quad B = ? \quad C = ?$$

	A	B	C
A)	+	-	÷
B)	÷	x	+
C)	x	-	+
D)	-	x	+
E)	+	+	x

1. 
 A) 4 B) 5 C) 6 D) 7 E) 8

4. 
 A) 4 B) 9 C) 10 D) 16 E) 25

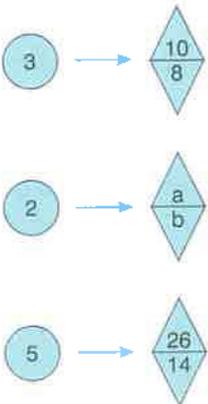
2. 
 $A + B = ?$
 A) 10 B) 11 C) 12 D) 16 E) 18

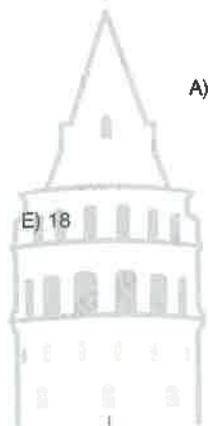
5. 
 A) 40 B) 42 C) 44 D) 46 E) 48

3.

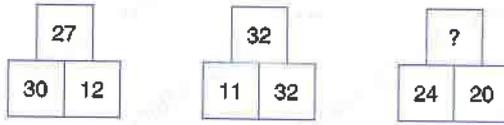
4	2	24	8
3	6	27	X
Y	2	35	15
6	Z	48	32

$$\frac{X}{Y + Z} = ?$$
 A) 7 B) 4 C) 3 D) 2 E) 1

6. 
 $a + b = ?$
 A) 10 B) 12 C) 13 D) 15 E) 16

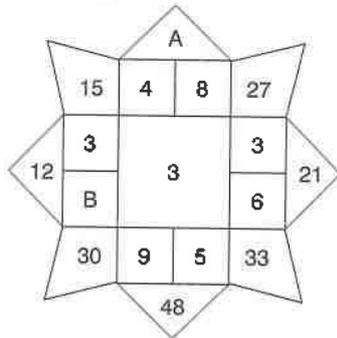


7.



- A) 32 B) 36 C) 44 D) 56 E) 64

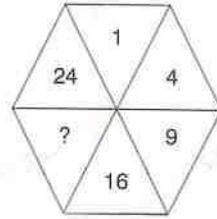
8.



$A - B = ?$

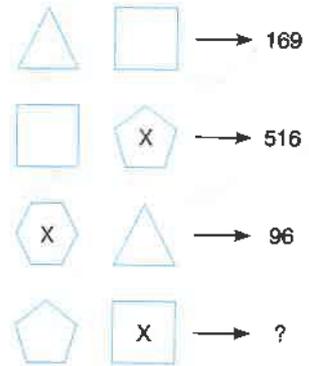
- A) 27 B) 32 C) 39 D) 41 E) 46

10.



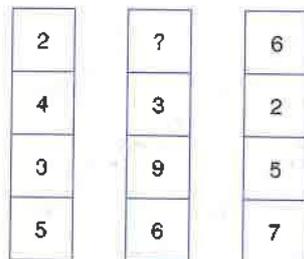
- A) 18 B) 19 C) 20 D) 21 E) 22

11.



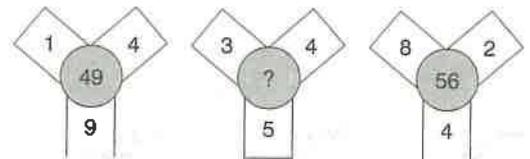
- A) 165 B) 254 C) 316 D) 425 E) 516

9.

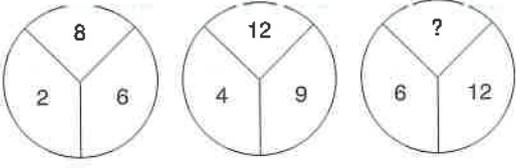


- A) 2 B) 4 C) 5 D) 7 E) 8

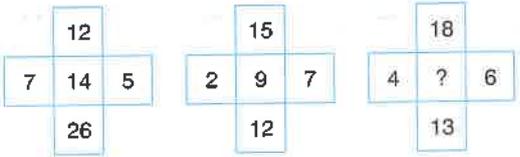
12.



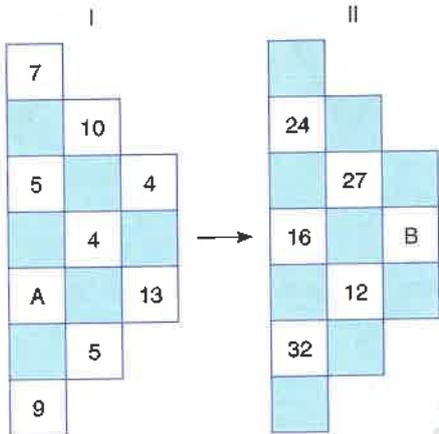
- A) 47 B) 53 C) 59 D) 65 E) 72

1. 

A) 17 B) 18 C) 19 D) 20 E) 21

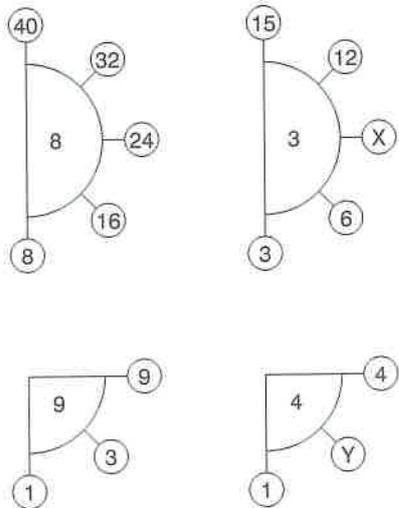
4. 

A) 9 B) 10 C) 11 D) 12 E) 13

2. 

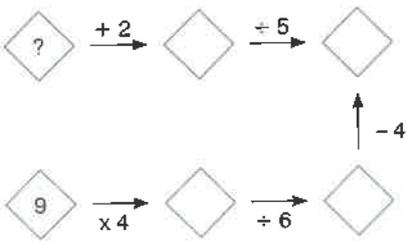
A + B = ?

A) 19 B) 27 C) 34 D) 41 E) 53

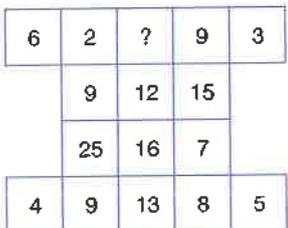
5. 

X + Y = ?

A) 15 B) 14 C) 13 D) 12 E) 11

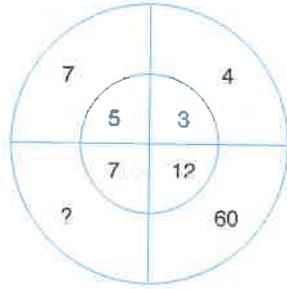
3. 

A) 6 B) 8 C) 10 D) 12 E) 14

6. 

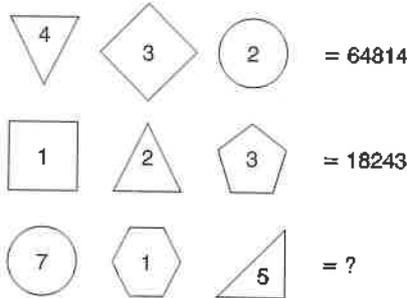
A) 7 B) 8 C) 10 D) 11 E) 13

7.



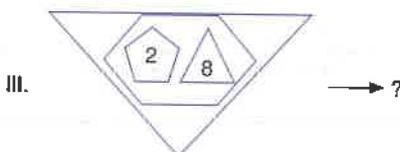
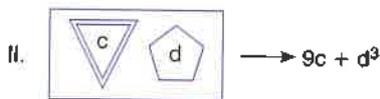
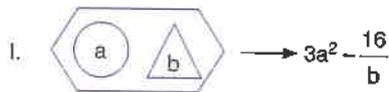
- A) 12 B) 14 C) 18 D) 21 E) 24

8.



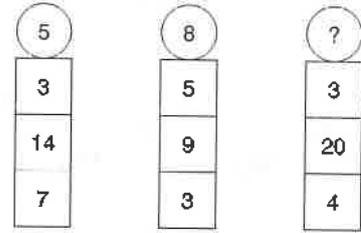
- A) 742125 B) 343125 C) 491125 D) 491625 E) 714625

9.



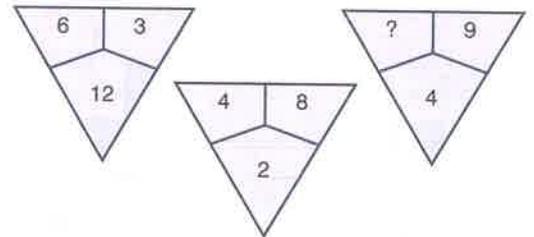
- A) 14 B) 18 C) 24 D) 28 E) 30

10.



- A) 5 B) 6 C) 7 D) 8 E) 9

11.



- A) 2 B) 3 C) 4 D) 6 E) 7

12.

3	4	6	3	5	7	7	5	3
5	9	2	4	9	1	1	9	4
7	1	8	6	2	8	8	2	6

?	?	8	2	5
?	?	6	1	4
?	?	3	7	9

A)

8	6	3
2	1	7
5	4	9

 B)

3	6	8
7	1	2
9	4	5

 C)

9	4	5
3	6	8
7	1	2

D)

5	2	8
4	1	6
9	7	3

 E)

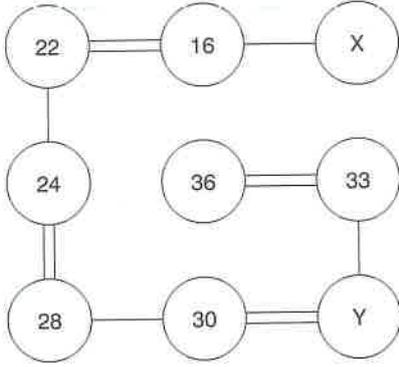
5	4	9
2	1	7
8	6	3

10 - D

11 - D

12 - E

1.



$X + Y = ?$

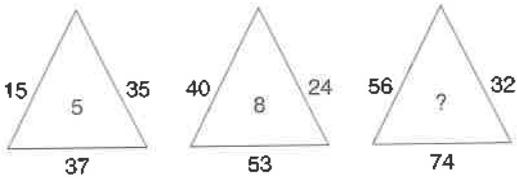
- A) 42 B) 45 C) 48 D) 51 E) 54

2.

4	4	2	2
7	8	3	3
9	7	4	7
?	5	5	2

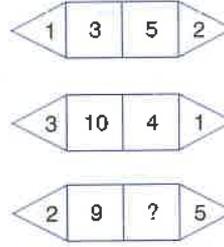
- A) 6 B) 7 C) 8 D) 9 E) 15

3.



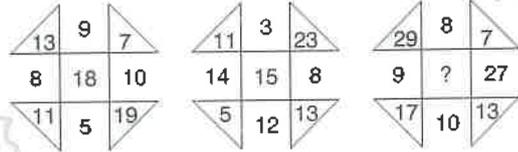
- A) 5 B) 6 C) 7 D) 8 E) 9

4.



- A) 8 B) 14 C) 18 D) 25 E) 27

5.



- A) 10 B) 11 C) 12 D) 13 E) 14

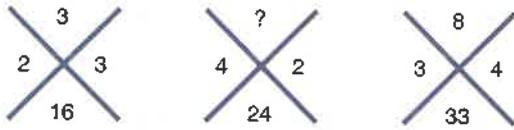
6.

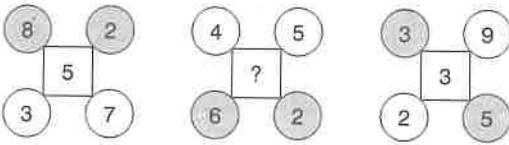
3	4	5
4	3	2
8	5	?

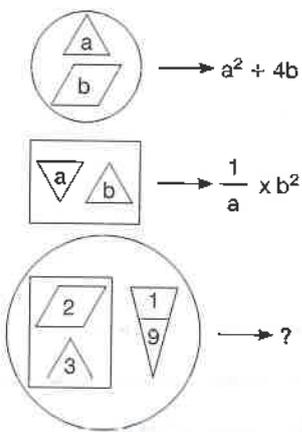
- A) 1 B) 3 C) 5 D) 7 E) 9

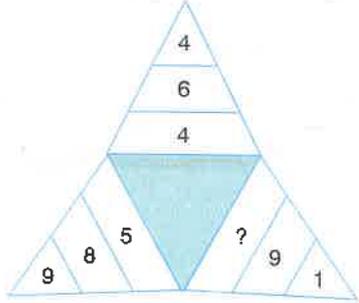
TEST 21

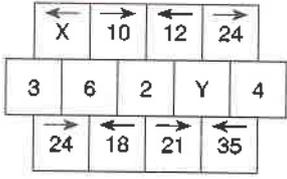
Sayı Bağıntıları / Number Relations

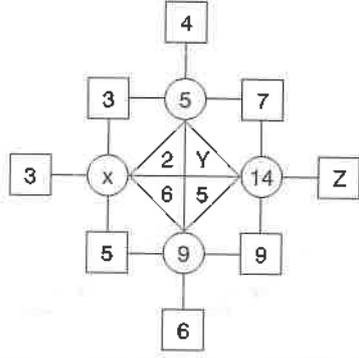
7. 
- A) 3 B) 4 C) 5 D) 6 E) 8

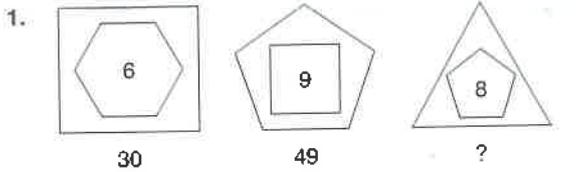
8. 
- A) 5 B) 6 C) 7 D) 8 E) 9

9. 
- A) 69 B) 72 C) 75 D) 78 E) 81

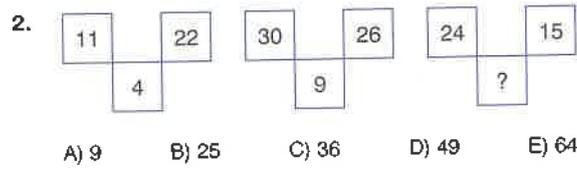
10. 
- A) 9 B) 8 C) 7 D) 6 E) 5

11. 
- $X - Y = ?$
- A) 8 B) 9 C) 10 D) 11 E) 12

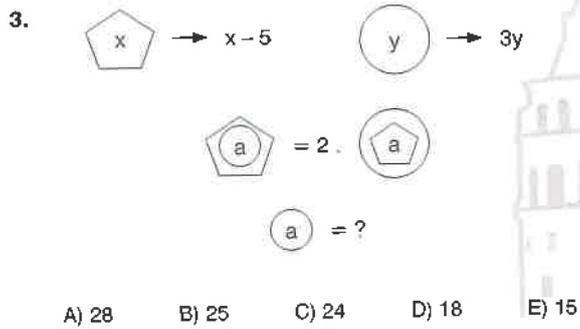
12. 
- $X - Y + Z = ?$
- A) 1 B) 2 C) 3 D) 4 E) 5



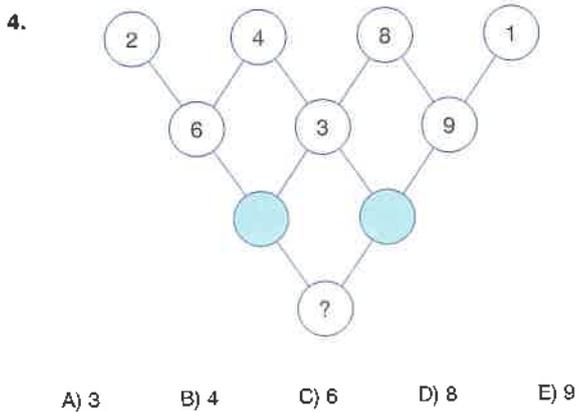
- A) 29 B) 32 C) 36 D) 40 E) 42



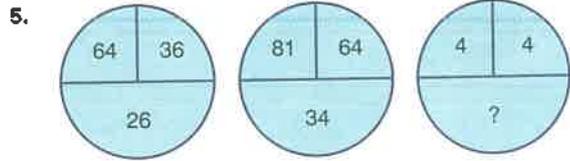
- A) 9 B) 25 C) 36 D) 49 E) 64



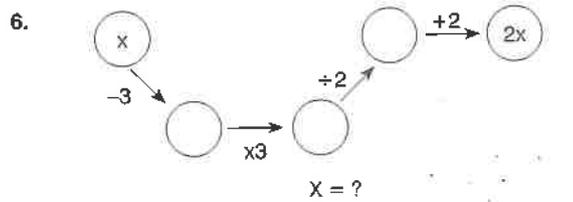
- A) 28 B) 25 C) 24 D) 18 E) 15



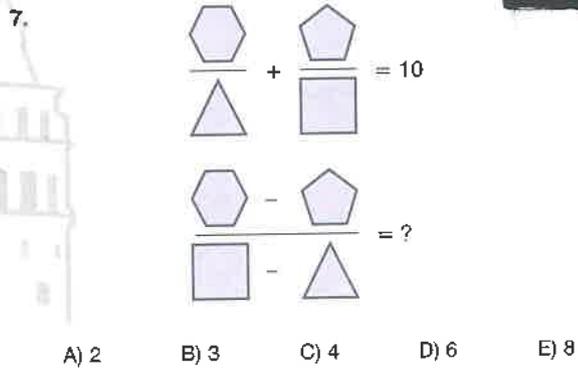
- A) 3 B) 4 C) 6 D) 8 E) 9



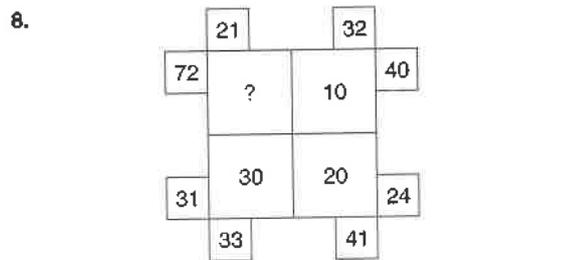
- A) 16 B) 22 C) 28 D) 32 E) 36



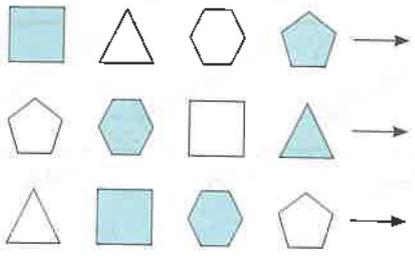
- A) 8 B) 6 C) -5 D) -4 E) -3



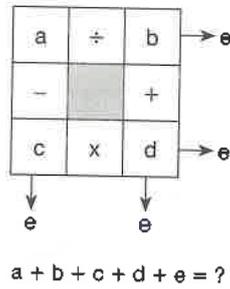
- A) 2 B) 3 C) 4 D) 6 E) 8



- A) 41 B) 51 C) 61 D) 71 E) 81

9.  → 1361
 → 5141
 → ?
- A) 1461 B) 1416 C) 3115 D) 3161 E) 3411

10. $a, b, c, d, e \in \mathbb{Z}^+$



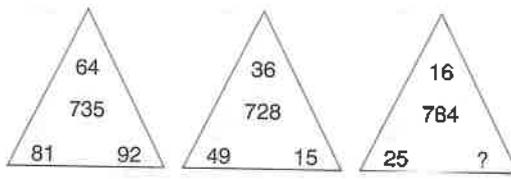
- A) 20 B) 18 C) 17 D) 15 E) 13

11.

2	24	1
3	3	2
56	6	

3	21	8
7	1	2
66	4	

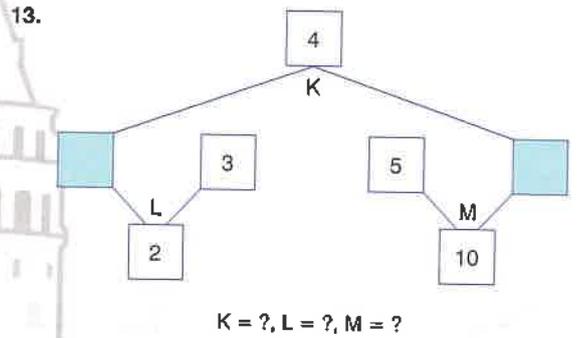
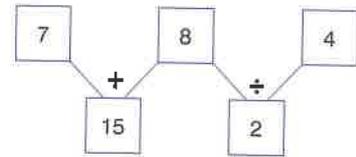
5	8	3	1
4	9	3	
A	B		
- $A + B = ?$
- A) 47 B) 49 C) 51 D) 53 E) 55

12. 
- A) 27 B) 39 C) 42 D) 56 E) 68

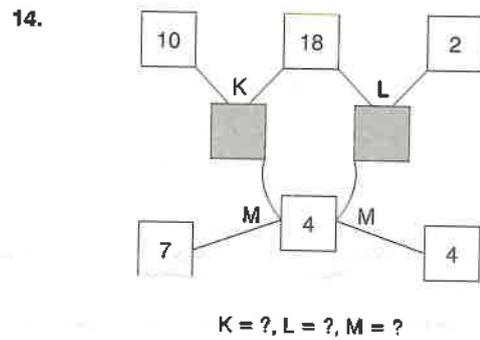
Aşağıdaki örneğe göre 13 ve 14. soruları cevaplayınız.

Answer questions 13 and 14 according to the example below.

Örnek (Example):

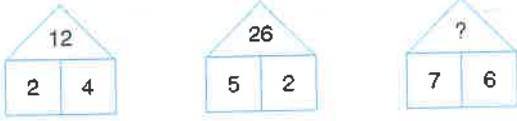


- A) x - + B) - ÷ + C) ÷ - x
 D) - ÷ x E) ÷ + -



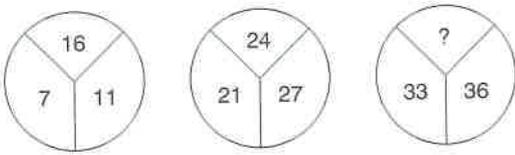
- A) + + - B) - ÷ + C) x + +
 D) + - + E) + x +

1.



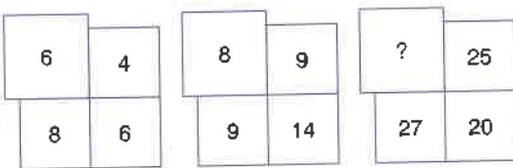
- A) 32 B) 36 C) 38 D) 40 E) 42

2.



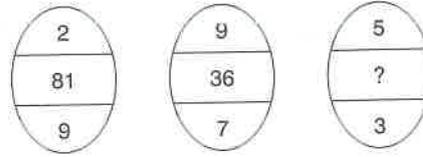
- A) 12 B) 28 C) 32 D) 36 E) 44

3.



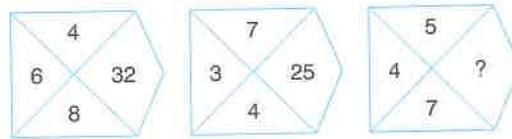
- A) 9 B) 10 C) 12 D) 16 E) 20

4.



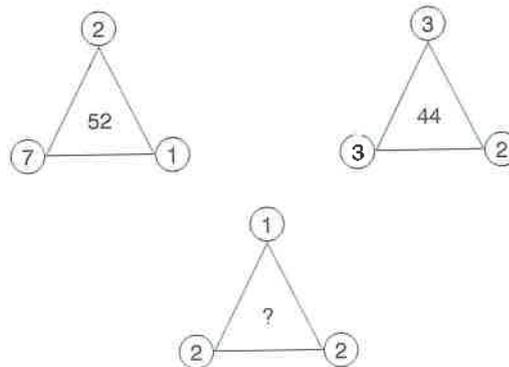
- A) 28 B) 33 C) 46 D) 49 E) 51

5.



- A) 22 B) 27 C) 31 D) 35 E) 46

6.



- A) 7 B) 8 C) 9 D) 10 E) 11

TEST 23

Sayı Bağıntıları / Number Relations

7.

	23
41	46

	18
34	25

	12
10	?

A) 18 B) 22 C) 26 D) 30 E) 34

10.

9	6
2	1

15	21
4	0

14	10
6	2

↓ ↓ ↓

5 ? 3

A) 2 B) 4 C) 6 D) 8 E) 9

8.

4	3
7	
5	

2	7
6	
8	

5	4
?	
8	

A) 8 B) 10 C) 12 D) 14 E) 16

11.

132	322
	364

234	211
	434

316	351
	?

A) 624 B) 676 C) 768 D) 879 E) 956

9.

3
27
1 2

2
16
3 1

5
?
3 3

A) 64 B) 81 C) 100 D) 128 E) 150

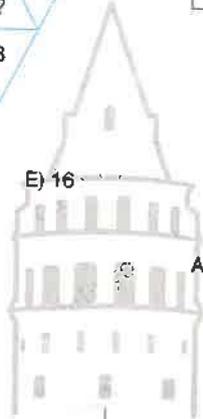
12.

20
33
25

42
?
51

32
36
33

A) 18 B) 21 C) 32 D) 48 E) 56



1.

+	a	b
a	5b	
b		20

$\Rightarrow a = ?$

- A) 5 B) 10 C) 15 D) 20 E) 25

2.

x	x	y
x		2x+y
y	x+5y	

$\Rightarrow 4x \cdot y = ?$

- A) 64 B) 72 C) 81 D) 84 E) 96

3.

+	a	b
a		
b	2a+4	3a

$\Rightarrow a + b = ?$

- A) 12 B) 16 C) 18 D) 20 E) 24

4.

x	A	3
a		A
b	24a	

$\Rightarrow b = ?$

- A) 2 B) 3 C) 4 D) 6 E) 8

5.

+	K	14
K	L	M
M		30

$\Rightarrow L = ?$

- A) 4 B) 6 C) 8 D) 10 E) 12

6.

x	a	b
c	21	4c
d	a ²	28

$\Rightarrow c = ?$

- A) 2 B) 3 C) 5 D) 6 E) 7

7.

-	2^8	2^9	
2^{10}		P	$\Rightarrow K = ?$
P	K		

- A) 2^8 B) 2^9 C) 2^{10} D) 2^{11} E) 2^{12}

8.

X	a	b	
a	$125b$		$\Rightarrow \frac{a}{b} = ?$
b		a	

- A) 2 B) 3 C) 4 D) 5 E) 6

9.

+	K	M	
K	$4M$		$\Rightarrow \frac{K}{L} = ?$
M		L	

- A) 1 B) $\frac{1}{2}$ C) 2 D) $\frac{1}{4}$ E) 4

10.

\div	$8!$	$4!$	
$10!$	A		$\Rightarrow \frac{A}{B} = ?$
$6!$		B	

- A) 2 B) 3 C) 4 D) 5 E) 6

11.

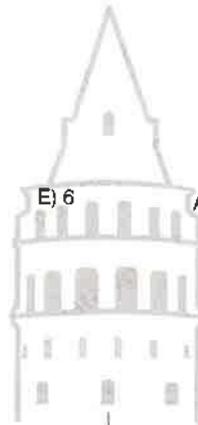
+	x	y	
x	16	$9a$	$\Rightarrow y = ?$
y		$10a$	

- A) 2 B) 3 C) 4 D) 8 E) 10

12.

-	a	b	
a		a.b	$b \neq 0$
b	b^2		$\Rightarrow a = ?$

- A) -2 B) -1 C) 1 D) 2 E) 3



1.

x	x	y
x		64
y		

+	x	y
x	A	
y	x^2+x	B

$\Rightarrow A + B = ?$

A) 28 B) 32 C) 36 D) 40 E) 44

4.

-	a	b
a		5
b		

x	a	b
a		
b	9	

$\Rightarrow a^2 + b^2 = ?$

A) 32 B) 41 C) 43 D) 47 E) 50

2.

-	a	b
a		
b	8	

+	a	b
a		18
b		

$\Rightarrow a^2 - b^2 = ?$

A) 144 B) 72 C) 36 D) -72 E) -144

5.

+	L	N
K	a	
M		b

x	L	N
K	2a	
M		2b

$\Rightarrow \frac{1}{K} + \frac{1}{L} + \frac{1}{M} + \frac{1}{N} = ?$

A) 1 B) $\frac{1}{6}$ C) 2 D) $\frac{1}{3}$ E) 4

3.

÷	b	d
a	3	
c		2

x	b	d
a	108	
c		18

$\Rightarrow \frac{a+b}{c-d} = ?$

A) 2 B) 4 C) 6 D) 8 E) 10

6.

+	x	y
y	4	
x		

x	x	y
y		
x		1

$\Rightarrow \frac{x^6 + 1}{x^3} = ?$

A) 44 B) 46 C) 48 D) 50 E) 52

7.

x	b	a
a		
b	2a	32

$$\Rightarrow a + b = ?$$

- A) 4 B) 6 C) 8 D) 12 E) 16

8.

+	a	b
b	4	
a		a · b

$$\Rightarrow a^b + b^a = ?$$

- A) 8 B) 9 C) 16 D) 17 E) 32

9.

x	3^x	9^y
3^x		
9^y	81	

+	3^x	9^y
3^x		
9^y	$\frac{1}{9}$	

$$\Rightarrow x^2 - 4y^2 = ?$$

- A) 6 B) 8 C) 9 D) 10 E) 12

10.

-	K	L
K		M
L	$M - 6N$	

$$\Rightarrow \frac{M+N}{M-N} = ?$$

- A) 1 B) 2 C) $\frac{5}{2}$ D) 3 E) $\frac{5}{3}$

11.

x	x	y
x	K	
y		L

$$x > y > 6$$

$$K - L = 27$$

$$\Rightarrow x + y = ?$$

- A) 3 B) 9 C) 12 D) 24 E) 27

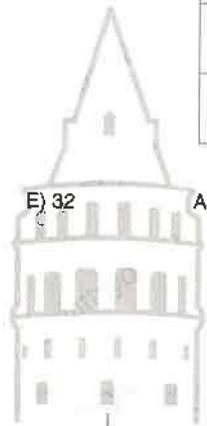
12.

x	4^a	8^b
4^a		
8^b	49	

+	4^a	8^b
4^a		7
8^b		

$$\Rightarrow \frac{a}{b} = ?$$

- A) 3 B) $\frac{5}{2}$ C) $\frac{9}{2}$ D) $\frac{4}{3}$ E) 1



1.

+	K	L	M
K	A		
L	2A		N
M	3A		

$\Rightarrow \frac{N}{K} = ?$

- A) 3 B) 5 C) 6 D) 8 E) 9

4.

X	A	B	C
A	C^n		
B		A	
C			B

$\Rightarrow n = ?$

- A) 2 B) 4 C) 6 D) 8 E) 10

2.

X	A	B	C
A			24
B	2		
C		3	

$\Rightarrow \frac{A+C}{B} = ?$

- A) 5 B) 8 C) 10 D) 12 E) 20 A) 84 B) 88 C) 90 D) 96 E) 100

5.

+	K	L	M
K	A	36	
L		B	2L
M		K	C

$\Rightarrow A + B + C = ?$

3.

+	K	L	M
K		-6	
L			6
M	4		

$\Rightarrow K \cdot L \cdot M = ?$

- A) -32 B) -18 C) 24 D) 32 E) 64

6.

x	A	B	C
A	$\frac{B}{4}$		B
B			
C	16		D

$\Rightarrow D = ?$

- A) 16 B) 36 C) 64 D) 72 E) 144

7.

+	A	B	C
A		42	
B		K	
C	8x	9x	10x

⇒ K = ?

- A) 32 B) 40 C) 48 D) 56 E) 64

8.

-	K	L	M
M	A		
L			-22
K		12	

⇒ A = ?

- A) -10 B) -5 C) 6 D) 8

9.

X	a	b	c
a		a+b	
b			$\frac{b+c}{2}$
c	$\frac{c+a}{5}$		

⇒ b = ?

- A) $-\frac{1}{6}$ B) -1 C) $\frac{1}{2}$ D) 2 E) $\frac{1}{3}$

10.

-	x	y	z
x		z	
y			3z
z	16	T	

⇒ T = ?

- A) 16 B) 12 C) 8 D) 4 E) -12

11.

X	2^{11}	2^9	2^7
2^7	A		
2^9		B	
2^{12}			C

⇒ A + B + C = ?

- A) 2^{19} B) 2^{20} C) 2^{21} D) 2^{22} E) 2^{23}

12.

+	\sqrt{K}	$\sqrt{10}$	$\sqrt{15}$
$\sqrt{90}$		L	
$\sqrt{135}$			M
$\sqrt{180}$	L+M		

⇒ K = ?

- A) 5 B) 8 C) 10 D) 18 E) 20



1.

x	a	b	c
a	8-b		b+2
b			
c			4-b

$\Rightarrow 2a + 4b + 2c = ?$

- A) 8 B) 12 C) 15 D) 16 E) 20

2.

+	x	y	z
y	K		x
x			
z	5y		36

$\Rightarrow K = ?$

- A) 12 B) 16 C) 24 D) 28 E) 36 A) 4 B) 9 C) 16 D) 36 E) 64

3.

x	c	b	a
a			b
b		2c	
c	32a		

$\Rightarrow a + b + c = ?$

- A) 12 B) 14 C) 16 D) 18 E) 20

4.

+	x	y	z
y	x.y		
z		7y.z	
x			4z.x

$x \neq 0, x.y.z = ?$

- A) $-\frac{1}{10}$ B) $-\frac{1}{5}$ C) $\frac{1}{5}$ D) $\frac{1}{10}$ E) $\frac{1}{20}$

5.

x	a	b	c
a	2c		
b		a.c	
c			8a

$\Rightarrow b^2 = ?$



6.

+	a	b	c
a			21
b	3c		
c		24	

$\Rightarrow a + b = ?$

- A) 21 B) 24 C) 27 D) 30 E) 33

7.

+	x	y	z
x			3y
y		4x	
z	18		

$$\Rightarrow z = ?$$

- A) 12 B) 15 C) 18 D) 21 E) 24

8.

x	b	a	c
a	9c		16b
b			
c	a		K

$$\Rightarrow K = ?$$

- A) 8 B) 9 C) 16 D) 24

9.

+	x	y	z
x			$y + \frac{1}{4}$
y	$z + \frac{1}{2}$		
z		$x + \frac{1}{4}$	

$$\Rightarrow x + y + z = ?$$

- A) $\frac{1}{3}$ B) 1 C) $\frac{1}{2}$ D) 2 E) $\frac{3}{2}$

10.

x	a	b	c
a	$\frac{2}{15}$		
b		$\frac{15}{43}$	
c			$\frac{43}{72}$

$$\Rightarrow a \cdot b \cdot c = ?$$

- A) $-\frac{1}{2}$ B) $\frac{1}{3}$ C) $\frac{1}{4}$ D) $\frac{1}{5}$ E) $\frac{1}{6}$

11.

+	x	y	z
z	y^2		
y		$x \cdot z$	
x			$4y - 4$

$$\Rightarrow x + y - z = ?$$



- A) 2 B) 3 C) 4 D) 5 E) 6

12.

x	a	b	c
a		5^{16}	
b			5^{25}
c	5^9		

$$\Rightarrow a = ?$$

- A) 5^{16} B) 625 C) 5^9 D) 25 E) 1

1.

+	a	b	c
a		2c	
b			
c			

x	a	b	c
a		$\frac{1}{5}$	
b	c		
c			

$\Rightarrow \frac{1}{a} + \frac{1}{b} + \frac{1}{c} = ?$

- A) 2 B) 3 C) 5 D) 7 E) 9

4.

+	x	y	z
x			98
y			
z			

+	x	y	z
x		$\frac{3}{5}$	
y			$\frac{2}{3}$
z			

$\Rightarrow x = ?$

- A) 16 B) 22 C) 28 D) 32 E) 36

2.

-	p	q	r
p			9
q			
r		7	

x	p	q	r
p		36	
q			
r			

$r < 0, r = ?$

- A) -7 B) -9 C) -11 D) -13 E) -15

5.

+	a	b	c
a			
b			
c		2a	

x	a	b	c
a		8	
b		a	
c			

$\Rightarrow c = ?$

- A) 2 B) 4 C) 6 D) 8 E) 9

3.

+	a	b	c
a			
b	c-3		a+7
c			

x	a	b	c
a			
b			
c	7b		

$\Rightarrow a^2 + c^2 = ?$

- A) 25 B) 34 C) 41 D) 45 E) 53

6.

+	K	L	M
K		M	
L			
M		3L	

x	K	L	M
K			162
L			
M			

$\Rightarrow M = ?$

- A) 9 B) 12 C) 15 D) 18 E) 24

7.

+	a	b	c
a	K		
b	6	L	
c			M

x	a	b	c
a	c		
b			
c			81

$$\Rightarrow K + L + M = ?$$

- A) 20 B) 24 C) 26 D) 30 E) 32

10.

+	x	y	z
x			
y			
z		24	

x	y	x	z
x			y
y			
z	9x		

$$\Rightarrow x + \frac{y}{z} = ?$$

- A) 10 B) 11 C) 14 D) 15 E) 18

8.

+	x	y	z
x		10	
y			
z			$3x^2$

x	x	y	z
x			12
y			
z			

$$\frac{x+z}{y} = ?$$

- A) 1 B) $\frac{2}{3}$ C) 2 D) $\frac{4}{5}$

11.

+	K	L	M
K			$4c$
L	$12a$		
M		$6b$	

x	K	L	M
K		a	
L			b
M	c		

$$\Rightarrow \frac{1}{K^2} + \frac{1}{L^2} + \frac{1}{M^2} = ?$$

- A) 49 B) 53 C) 69 D) 75 E) 81

9.

+	a	b	c
a			$9T$
b	$15T$		
c		$12T$	

x	a	b	c
a	K		
b		L	
c			M

$$\Rightarrow \frac{K+L}{M} = ?$$

- A) 8 B) 10 C) 13 D) 15 E) 18

12.

x	a	b	c
a		c	
b	$\frac{b^3}{2}$		
c			

+	a	b	c
a		$a-b$	
b			
c			

$$\Rightarrow a + b + c = ?$$

- A) 6 B) 8 C) 12 D) 14 E) 21

1.

+	p	q	r
p	6r		8

$$\Rightarrow p + \frac{q}{r} = ?$$

x	p	q	r
r		36	

- A) 6 B) 9 C) 12 D) 15 E) 18

2.

-	a	b	c
a			7

$$\Rightarrow a + b - c = ?$$

+	a	b	c
b	$\frac{2}{5}$		$\frac{1}{2}$

- A) 14 B) 21 C) 28 D) 35 E) 42

3.

+	K	L	M
K			
M			K^2

$$\Rightarrow \frac{K^2 + M^2}{L^2} = ?$$

x	K	L	M
K		M	
L			16

- A) 12 B) 14 C) 16 D) 18 E) 20

4.

x	a	b	c
c	36	a	

$$\Rightarrow b = ?$$

÷	a	b	c
a		12	

- A) 1 B) $\frac{1}{2}$ C) $\frac{1}{3}$ D) $\frac{1}{4}$ E) $\frac{1}{6}$

5.

+	p	q	r
r			p+q

$$\Rightarrow r = ?$$

x	p	q	r
p	q	125	

- A) 5 B) 10 C) 15 D) 20 E) 25

6.

+	K	L	M
K		10	
L			N

$$A - B = -20$$

$$\Rightarrow (KL) - (MN) = ?$$

x	K	L	M
K	A		N
L		B	

- A) 18 B) 20 C) 22 D) 28 E) 32

7.

X	a	b	c
a		52	48
b			5b+5c

$\Rightarrow a \cdot b \cdot c = ?$

- A) 200 B) 300 C) 400
D) 500 E) 600

8.

+	x	y	z
x	z		3
y		x	

$\Rightarrow x + y \cdot z = ?$

- A) 2 B) 3 C) 4 D) 5

9.

X	K	L	M
M	9^{19}	9^{23}	

$\Rightarrow N = ?$

+	K	L	M
M	9^{13}	N	

- A) 9^5 B) 9^7 C) 9^9 D) 9^{11} E) 9^{13}

10.

-	x	y	z
x			2y
y	z+14		x

$\Rightarrow x + 3z = ?$

- A) -14 B) -7 C) 7
D) 21 E) 28

11.

x	a	b	c
b		18c	
c	12b		$\frac{ab}{c}$

$\Rightarrow c = ?$

- A) 3 B) 4 C) 6 D) 9 E) 12

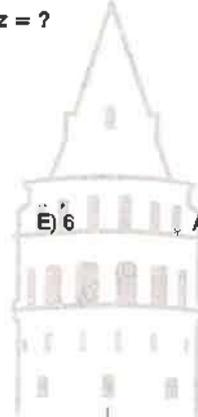
12.

+	K	L	M
K			10K
L		10K	

$\Rightarrow (L - M)^K = ?$

x	K	L	M
M		180	

- A) 16 B) 32 C) 36 D) 64 E) 128



1.

+	K	L	M	N
K				17
L				
M	11		8	
N		19		

$\Rightarrow K + L = ?$

- A) 15 B) 16 C) 17 D) 18 E) 19

2.

X	A	B	C	D
A				17
B		A^3		A^7
C		A^5		A^n
D				

$\Rightarrow n = ?$

- A) 2 B) 5 C) 6 D) 9

3.

+	a	b	c	d
a		28		
b			30	
c				29
d	27			

$\Rightarrow a + c = ?$

- A) 28 B) 30 C) 32 D) 34 E) 35

4.

-	x	y	z	t
x		25		A
y			36	
z				9
t				

$\Rightarrow A = ?$

- A) 35 B) 49 C) 56 D) 64 E) 70

5.

÷	a	b	c	d
a				e
b	$\frac{2}{7}$			
c		14		
d			$\frac{1}{6}$	

$\Rightarrow e = ?$

- A) $\frac{1}{2}$ B) $\frac{2}{3}$ C) 1 D) $\frac{3}{2}$ E) 2

6.

x	4!	5!	6!	7!
210	a!			
42		b!		
56			c!	
8				d!

$\Rightarrow a + b + c + d = ?$

- A) 28 B) 29 C) 30 D) 31 E) 32

7.

x	p	q	r	s
p				K
q	$\frac{14}{15}$			
r		$\frac{7}{100}$		
s			$\frac{9}{8}$	

$$\Rightarrow K = ?$$

- A) 14 B) 15 C) 16 D) 18 E) 20

8.

+	a	b	c	d
a		c-11		
b			d+13	
c				a-17
d	b+23			

$$\Rightarrow a + b + c + d = ?$$

- A) 7 B) 8 C) 9 D) 10

9.

+	K	L	M	N
K			$\frac{7a}{10}$	
L				$\frac{9a}{14}$
M		$\frac{5a}{18}$		
N	$\frac{1}{8}$			

$$\Rightarrow a = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 8

10.

+	K	L	M	N
K				
L	10X	11X	12X	13X
M				
N	144			Y

$$\Rightarrow Y = ?$$

- A) 150 B) 180 C) 210 D) 240 E) 270

11.

-	2^6	2^8	2^{10}	2^{12}
2^7	P			
2^9		Q		
2^{11}			R	
2^{13}				S

$$P \cdot Q \cdot R \cdot S = 2^a \Rightarrow a = ?$$



- A) 11 B) 36 C) 37 D) 38 E) 40

12.

x	a	b	c	d
a		$\frac{a+b}{12}$		
b			$\frac{b+c}{9}$	
c				$\frac{c+d}{21}$
d				

$$\Rightarrow \frac{1}{a} + \frac{1}{d} = ?$$

- A) 16 B) 18 C) 20 D) 22 E) 24

1.

2	1	8	9
6	2	4	4
8	?	6	7
9	2	7	3

- A) 3 B) 4 C) 5 D) 6 E) 9

2.

6	9	7	8
8	4	9	7
7	8	8	9
7	?	8	6

- A) 5 B) 6 C) 4 D) 7

3.

6	2	4	6
4	7	?	2
8	9	1	2
6	4	4	3

- A) 2 B) 3 C) 5 D) 7 E) 9

4.

2	2	?	6
5	7	5	4
5	3	3	4
2	3	5	3

- A) 2 B) 3 C) 4 D) 5 E) 6

5.

?	30	21	18
96	32	16	12
50	42	38	36
161	36	11	6



- E) 8 A) 49 B) 57 C) 63 D) 68 E) 72

6.

16	12	21	?
8	16	18	13
24	12	9	16
16	24	16	19

- A) 9 B) 12 C) 16 D) 20 E) 24

7.

3	3	6
9	4	7
3	2	?

- A) 1 B) 2 C) 3 D) 4 E) 5

8.

7	5	6	4
14	?	12	8
42	?	?	24

- A)

10
30 24

 B)

12
36 30

 C)

24
48 36

 D)

15
45 30

 E)

10
30 36

9.

2	9	7	5
3	?	4	6
2	8	6	4
8	7	2	9
5	9	3	6

- A) 5 B) 6 C) 7 D) 8 E) 9

10.

25	18	35
8	?	9
2	4	6

- A) 2 B) 3 C) 4 D) 7 E) 9

11.

33	18	?	?
26	48	96	?
72	18	72	18

- A)

24	66
90	

 B)

60	48
24	

 C)

72	18
90	

 D)

72	14
86	

 E)

36	64
80	

12.

3	5	2	4
4	2	6	?
32	24	28	32
7	1	6	2
2	9	2	5

- A) 2 B) 3 C) 4 D) 6 E) 8

1.

18	4	14
8	?	16
10	20	6

- A) 6 B) 9 C) 12 D) 15 E) 18

2.

3	5	7	9
5	8	?	8
6	9	7	9
7	11	8	13

- A) 7 B) 6 C) 5 D) 4

3.

6	2	1	6
4	0	6	4
7	?	4	3
5	1	2	5

- A) 0 B) 3 C) 5 D) 7 E) 8

4.

9	22	?
7	14	8
4	6	3

- A) 1 B) 3 C) 5 D) 6 E) 7

5.

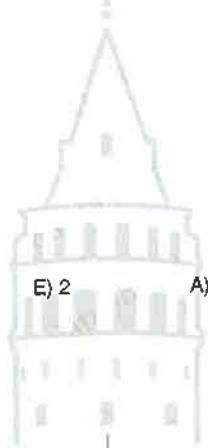
4	8	4	36
8	4	7	36
5	9	3	?
6	5	6	36

- E) 2 A) 32 B) 36 C) 40 D) 44 E) 48

6.

?	8	3	9
5	4	2	7
9	2	4	6
3	6	1	8

- A) 5 B) 6 C) 7 D) 8 E) 9



7.

64	16	8
49	20	16
?	36	45

- A) 72 B) 81 C) 84 D) 96 E) 99

10.

59	47	43
53	?	29
37	31	23

- A) 21 B) 28 C) 35 D) 38 E) 40

8.

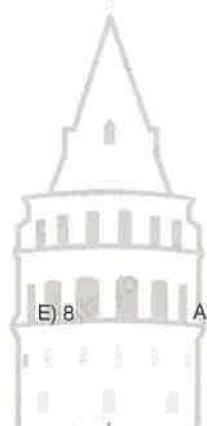
2	3	4	6
3	2	6	3
5	3	3	2
2	?	4	6

- A) 4 B) 5 C) 6 D) 7

11.

1	6	9	5
4	?	6	7
6	2	2	8
2	7	9	6

- A) 8 B) 6 C) 4 D) 3 E) 2



9.

2	6	1	6	36
1	4	1	2	42
4	8	3	6	?
3	9	?	8	34

- A) 22 B) 24 C) 32 D) 38 E) 48

12.

2	6	16	2	6
1	3	12	1	7
2	8	24	6	?
3	6	18	2	8

- A) 5 B) 6 C) 10 D) 12 E) 15

1.

8	21	45	32
30	9		15
54		?	
35	24		40

- A) 72 B) 75 C) 81 D) 94 E) 99

4.

π	2	3	4
3		54	
2	8	?	32
4		145	

- A) 8 B) 13 C) 17 D) 29 E) 32

2.

J	18	16	14
12	42		B
16		48	
20	A		54

$\Rightarrow A - B = ?$

- A) 12 B) 14 C) 16 D) 18 E) 20

5.

☆	8	10	14
22	K		9
24	7	L	
70		4	M

$\Rightarrow K + L + M = ?$

- A) 18 B) 19 C) 20 D) 21 E) 22

3.

G	14	22
20	L	25
32	100	T

$\Rightarrow L^2 + T = ?$

- A) 140 B) 155 C) 170 D) 185 E) 200

6.

☼	7	9
9	36	X
4	Y	63

$\Rightarrow X + Y = ?$

- A) 75 B) 80 C) 85 D) 90 E) 100

7.

364	G	100	40
322	10	L	34
286	64	114	T

$$\Rightarrow G + L + T = ?$$

- A) 90 B) 100 C) 110
D) 120 E) 130

8.

6	72	A	42
8	B	56	23
10	200	90	C

$$\Rightarrow A + B - C = ?$$

- A) 142 B) 148 C) 154
D) 160 E) 166

9.

24	3	30	M
62	4	L	16
86	K	100	4

$$\Rightarrow M + \frac{L}{K} = ?$$

- A) 12 B) 14 C) 16 D) 18 E) 20

10.

	17	29	43
	16	22	C
	A	81	21
	10	B	15

$$\Rightarrow A + B + C = ?$$

- A) 16 B) 24 C) 36
D) 58 E) 64

11.

	123	324	418
	26	68	T
	24	L	22
	G	28	33

$$\Rightarrow \sqrt{G} - L + T = ?$$

- A) 15 B) 18 C) 21
D) 24 E) 27

12.

	144	228	308
C	117		215
F	O	50	38
K	81	144	

$$\Rightarrow O + \diamond + \nabla = ?$$

- A) 660 B) 870 C) 890
D) 890 E) 900



1.

	12	20	32
36	27	18	C
24	18	B	30
16	A	14	35

$\Rightarrow A + B + C = ?$

- A) 64 B) 66 C) 72 D) 78 E) 80

2.

	53	68	77
	34	100	K
	51	84	L
	61	82	M

$\Rightarrow K - L + M = ?$

- A) 95 B) 96 C) 97 D) 98

3.

	13	24	30
16	A	8	6
28	7	B	4
39	6	5	C

$\Rightarrow A + \frac{B}{C} = ?$

- A) 8 B) 9 C) 11 D) 12 E) 14

4.

241	164	84	65
152	K	L	M
324	916	68	56

$\Rightarrow K + L + M = ?$

- A) 500 B) 601 C) 702 D) 803 E) 904

5.

	32	33	35
39	94	A	61
40	46	B	52
41	18	C	63

$\Rightarrow A - B + C = ?$

- A) 10 B) 15 C) 20 D) 25 E) 30

6.

	α	γ
124	49	2
248	196	4
389	400	6
555	A	B

$\Rightarrow A + B = ?$

- A) 230 B) 231 C) 232 D) 233 E) 234

7.

	6658	7063	9999
K	5	4	?
L	9	10	?
M	70	70	?

- A) 3,8,114 B) 6,8,117 C) 5,7,121
 D) 6,8,124 E) 5,9,126

8.

	A	B	C
24	14	12	26
28	?	?	?
36	27	27	54

- A) 25,72,99 B) 25,84,84 C) 26,60,86
 D) 26,72,98 E) 27,54,81

9.

	⊙	◇	α
41	K	15	21
13	6	L	19
92	20	30	M

$\Rightarrow K + L - M = ?$

- A) 3 B) 5 C) 7 D) 9 E) 11

10.

⊙	44	48	50
40	21	11	9
46	A	47	C
52	12	B	51

$\Rightarrow A + B - C = ?$

- A) 42 B) 46 C) 48 D) 52 E) 54

11.

◇	24	36	47
48	40	50	60
63	26	36	46
76	K	L	M

$\Rightarrow K - L + M = ?$

- A) 36 B) 40 C) 56 D) 60 E) 76

12.

∞	56	39	37
27	16	33	C
48	28	B	47
87	A	39	41

$\Rightarrow A + B - C = ?$

- A) 16 B) 20 C) 32 D) 48 E) 54

1.

G			L
		24	
	32		
T		30	A

$\Rightarrow G + L + T + A = ?$

- A) 100 B) 112 C) 124 D) 133 E) 144

2.

		52		
			K	
	L			
49				25
		M		

$K + L + M = N^2 \Rightarrow N = ?$

- A) 9 B) 10 C) 11 D) 12

3.

1.	1	3	5	7
2.	9	11	13	15
3.	17	19	21	23
⋮	⋮	⋮	⋮	⋮
70.	A	B	C	D

$\Rightarrow A + B + C - D = ?$

- A) 1102 B) 1104 C) 1106
D) 1108 E) 1110

4.

44			N
		M	
30			
			35

$\Rightarrow M + N = ?$

- A) 97 B) 99 C) 101 D) 103 E) 105

5.

15				27
	A			
		B		
			C	
19				D

$\Rightarrow A + B + C + D = ?$



- A) 9 B) 10 C) 11 D) 12 E) 13 A) 92 B) 94 C) 96 D) 98 E) 100

6.

1.	1	2	4	7
2.	11	16	22	29
3.	37	46	56	67
⋮	⋮	⋮	⋮	⋮
n.	*	*	*	1541

$\Rightarrow n = ?$

- A) 13 B) 14 C) 15
D) 16 E) 17

1.

+	a	b	c
a	G		b+5
b	c+7	L	
c		a+4	T

$\Rightarrow G + L + T = ?$

- A) 8 B) 16 C) 24 D) 32 E) 48

2.

X	K	L	M
K		M ²	
L			36
M	L ²		

$\Rightarrow K^2 + L^2 + M^2 = ?$

- A) 72 B) 84 C) 96 D) 108 E) 144

3.

2	5	6	4
6	A	7	8
7	3	B	5
8	10	17	12

$\Rightarrow \sqrt{A+B} = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

4.

x	3 ^k	3 ^r	÷	3 ^k	3 ^r
3 ^k		81	3 ^k		
3 ^r	81		3 ^r	$\frac{1}{9}$	

$\Rightarrow k^2 - r^2 = ?$

- A) -8 B) -5 C) -1 D) 5 E) 8

5.

+	a	b	x	a	b
a			a		4
b	6		b		

$\Rightarrow \frac{a}{b} + \frac{b}{a} = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

6.

A	5	7	C	23	29
3	A	12	12	53	14
8	4	65	14	73	C

$\Rightarrow A + C = ?$

- A) 63 B) 78 C) 85 D) 94 E) 102

7.

x	p	q	r
p		$\frac{p+q}{5}$	
q	32		$\frac{q+r}{7}$
r	$\frac{r+p}{8}$		

$$\Rightarrow \frac{p}{q} + \frac{p}{r} = ?$$

- A) $p+10$ B) $7p-4$ C) $6p$
 D) $10p-1$ E) $5p+10$

10.

-	a	b	c
a		$b+c$	
b			9
c	$2b-c$		

$$\Rightarrow c^2 = ?$$

- A) 81 B) 121 C) 144
 D) 169 E) 196

8.

+	a	b	c
a		c^3	
b			$a-4$
c	$3a-68$		

$$\Rightarrow b = ?$$

- A) 24 B) 28 C) 32
 D) 36 E) 40

11.

9	3	B	5
2	A	8	4
4	1	3	2
6	8	9	7

$$\Rightarrow A \cdot B = ?$$



C) 32

- A) 42 B) 54 C) 64
 D) 78 E) 81

9.

\div	a^6	b^7	c^8
a^{12}	64		
b^{11}		81	
c^{10}			100

$$\Rightarrow a^2 + b^2 + c^2 = ?$$

- A) 99 B) 113 C) 169
 D) 216 E) 245

12.

	I	II	III
32	K	1	8
34	21	L	64
36	81	9	M

$$\Rightarrow K + L + M = ?$$

- A) 208 B) 216 C) 223
 D) 234 E) 256

1.

+	x	y	z
x	?		$\frac{x^2 - z^2}{25}$
y	$\frac{x^2 - y^2}{27}$		28

- A) 64 B) 68 C) 72 D) 76 E) 80

2.

	12	16	72
◆	24	64	30

$\Rightarrow \text{◆} \text{◆} 42 = ?$

- A) 52 B) 64 C) 75 D) 81

3.

$\sqrt{-}$	a	b	c
a		5	13
b			?

- A) 8 B) 9 C) 10 D) 11 E) 12

4.

x	2^r	2^s	÷	2^r	2^s
2^r			2^r		8
2^s	32		2^s		

$\Rightarrow r^2 - s^2 = ?$

- A) 12 B) 15 C) 20 D) 24 E) 30

5.

x	a	b	c
a		8	
b			4
c	b^3		

$\Rightarrow a + \frac{b}{c} = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9

6.

1	7	1	7
1	2	2	4
3	1	2	6
2	?	1	8

- A) 1 B) 2 C) 3 D) 4 E) 6

7.

♥	6	♥	4
6	$\frac{1}{3}$	6	5
3	$\frac{1}{2}$	8	3
2	$\frac{2}{3}$	12	2

$$\Rightarrow \frac{1}{2} \heartsuit (8 \heartsuit 8) = ?$$

- A) 2 B) 3 C) 4 D) 6 E) 8

8.

÷	a	b	c
a		18	c^3
b			12
c			

$$\Rightarrow \sqrt{a} = ?$$

- A) 6 B) 12 C) 24 D) 36

9.

+	p	q	r
p		$8r+18$	
q			
r	$7r$	$5r$	

$$\Rightarrow \sqrt{q} = ?$$

- A) 2 B) 3 C) 4 D) 5 E) 6

10.

	22	26	36
20	G	60	
21	7	L	72
25		15	T

$$\Rightarrow G + L + T = ?$$

- A) 84 B) 91 C) 99 D) 103 E) 107

11.

X	K	L	M
K			$6K^2$
÷	K	L	M
L	K		
+	K	L	M
M		-9	

$$\Rightarrow \frac{M}{K+L} = ?$$

- A) -3 B) -2 C) 2 D) 4 E) 6

12.

	61	72	18
24	33	92	
	18	?	52
34	26	52	
	63	23	94
62	25	72	

- A) 28 B) 32 C) 46 D) 52 E) 65

1.

+	a	b	x	a	b
a		$\sqrt{10}$	a		
b			b	2	

$\Rightarrow a^4 + b^4 = ?$

- A) 14 B) 16 C) 18 D) 22 E) 28

2.

\sqrt{x}	K	L	M	N
K		6		
L			12	
M				4
N	K			

$\Rightarrow M = ?$

- A) 2 B) 4 C) 8 D) 12 E) 16

3.

+	A	B	C	D
A			36	
B	X	C		
C				
D			Y	A

$\Rightarrow X + Y = ?$

- A) 18 B) 32 C) 48 D) 54 E) 72

4.

⊙	51	24	⊠	10	20
33	32		48	12	B
22	A	20	44		64

$\Rightarrow A + B = ?$

- A) 150 B) 153 C) 156 D) 162 E) 165

5.

+	G	L	T	A
A				G
G	L			
L			A+G	
T		12		

$\Rightarrow G \cdot A + L \cdot A + T \cdot A = ?$

- A) 60 B) 72 C) 80 D) 84 E) 90

6.

K				M
		20		
12			21	
L		14		N

$\Rightarrow K - L + M - N = ?$

- A) 16 B) 18 C) 20 D) 22 E) 24

7.

+	A	B	C
A	B		B ²
X	A	B	C
B		A ³	

$\Rightarrow C = ?$

- A) 30 B) 36 C) 42 D) 49 E) 60

8.

$\sqrt{+}$	K	L	M
K		$\frac{1}{2}$	
L			$\frac{3}{2}$

$\Rightarrow K - M = ?$

-	K	L	M
M		33-K	

- A) 9 B) 15 C) 21 D) 27 E) 33

9.

x	b	a
a	5	
b		

-	b ²	a ²
a ²		
b ²		24

$\Rightarrow a^2 - ab + b^2 = ?$

- A) 21 B) 22 C) 23 D) 25 E) 26

10.

26	24	30
32	?	24
25	63	54

- A) 28 B) 32 C) 36 D) 40 E) 44

11.

+	G	L	T
A	28	32	36
B	34	40	45
C	55	66	68
D	60	64	72

$A + B + C + D = 68$

$\Rightarrow G + L + T = ?$

- A) 98 B) 99 C) 100 D) 101 E) 102

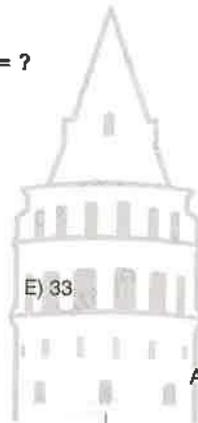
12.

x	a	b	c
m	$\frac{2}{3}$	1	$\frac{3}{5}$
n	$\frac{5}{2}$	4	$\frac{1}{2}$

$a \cdot b \cdot c = 4$

$\Rightarrow m \cdot n = ?$

- A) $\frac{1}{8}$ B) $\frac{1}{4}$ C) 1 D) $\frac{1}{2}$ F) 2



1.

9	7	16
3	?	6
6	8	4

- A) 2 B) 4 C) 6 D) 8 E) 10

2.

x	a	b
a	A	$\frac{2a+2b-1}{4}$
b	$\frac{a^2+b^2}{2}$	B

$\Rightarrow A + B = ?$

- A) 2 B) $\frac{1}{2}$ C) $\frac{1}{4}$ D) 2

3.

+	x	y
x		$3xy-1$
y	$xy+1$	

$\Rightarrow \frac{1}{x} + \frac{1}{y} = ?$

- A) $\frac{1}{2}$ B) $\frac{5}{6}$ C) 1 D) $\frac{4}{3}$ E) 2

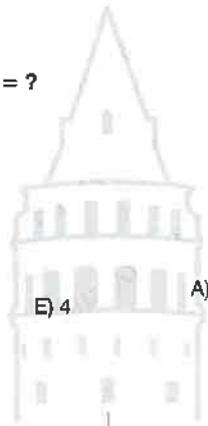
4.

+	a	b	c
a		$7x$	36
b		$10x$	
c		$15x$?

- A) 20 B) 32 C) 48 D) 54 E) 60

5.

\div	x	y	z
x		$\frac{9}{2}$	
y			$\frac{8}{3}$
z	?		



- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) 1 D) 2 E) 4

6.

20	32	44	56
14	25	?	37
6	7	12	19
8	18	20	18

- A) 20 B) 25 C) 32 D) 37 E) 44

7.

x	a	2	c
6		12	
b	c		

⇒ a = ?

+	a	b	c
c		14	

A) 5 B) 6 C) 7 D) 8 E) 9

8.

+	K	L	M
K		3K	
L			K ²

⇒ $K + \frac{L}{M} = ?$

x	K	L	M
M		18	

A) 3 B) 4 C) 5 D) 8

10.

+	K	L	M	N
K			5K	
L		K		
M			N	
N	9			

⇒ N = ?

A) 4 B) 5 C) 6 D) 7 E) 8

11.

x	a	b	c	d
a		54	b+d	
b				
c	4d			
d	b			

⇒ c = ?

A) 4 B) 5 C) 6 D) 8 E) 9

9.

	254	365	427
⊕	22	33	A
⊗	56	68	B
⊖	9	11	C

⇒ A + B - C = ?

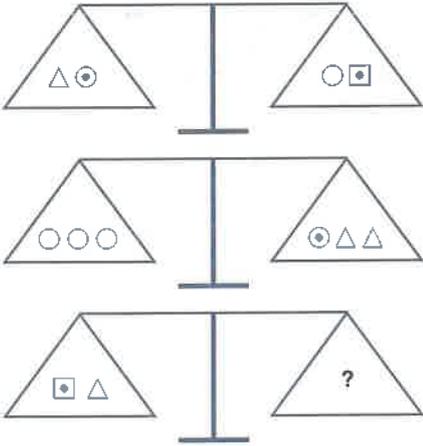
A) 40 B) 49 C) 54 D) 63 E) 65

12.

2	5		4	
4	3			1
		?		
	4		3	
				2

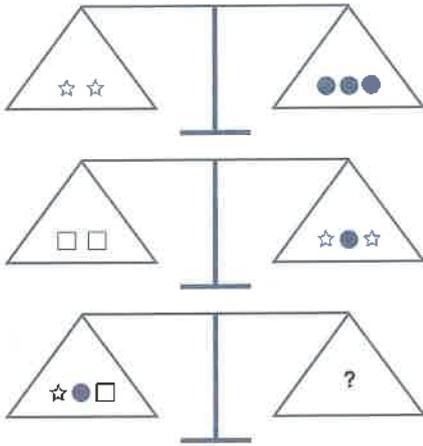
A) 1 B) 3 C) 5 D) 2 E) 4

1.



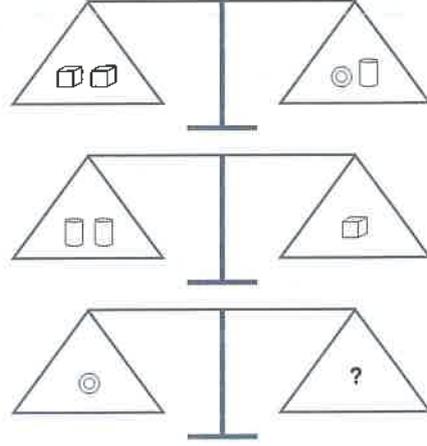
- A) ○○ B) ○○○ C) ○○○○
 D) ○ E) ○○○○○

2.



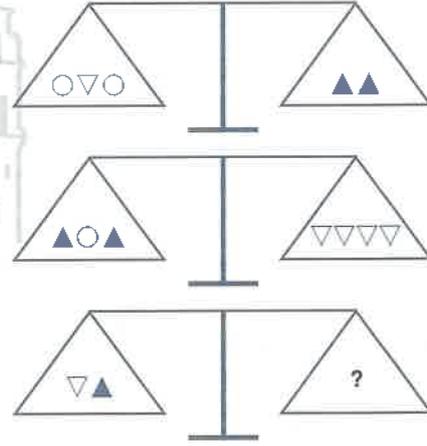
- A) ●□□ B) ☆☆☆ C) □□□
 D) ☆☆☆ E) ●☆☆

3.



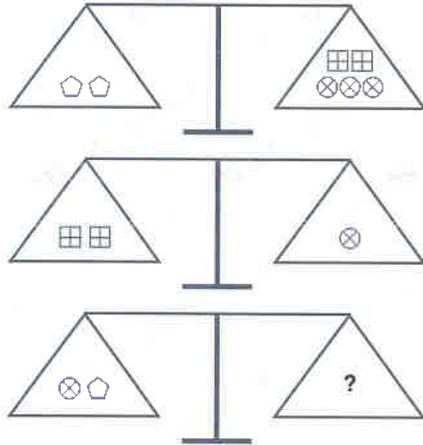
- A) □□ B) □□ C) □□
 D) □□□ E) □□□□

4.



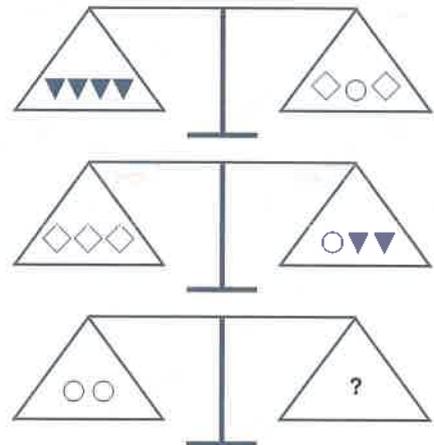
- A) ▲▲ B) ○○▽ C) ▽▽
 D) ○○○ E) ▲○

5.



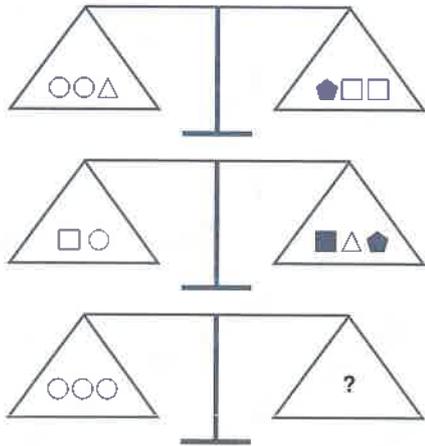
- A) ○ ○ B) ⊗ ⊗ C) ⊗ ⊗ ⊗
 D) □ □ □ □ E) □ □ □ ⊗

7.



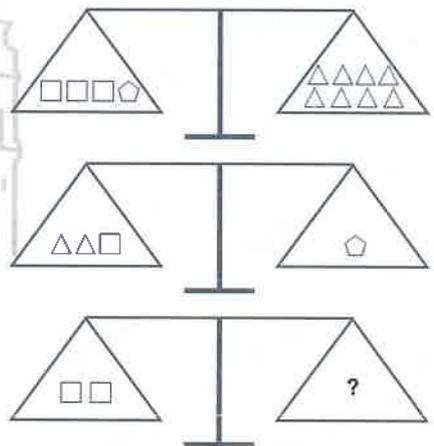
- A) ◇ ▼ B) ▼ ▼ C) ◇ ▼ ▼ ▼
 D) ○ ◇ E) ◇ ◇ ◇ ◇

6.

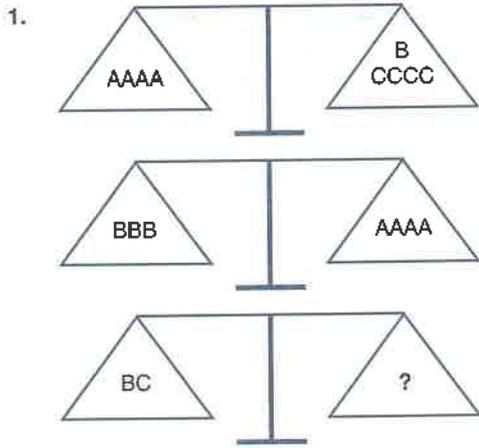


- A) □ □ □ B) ● ● □ C) ○ △ △ ■
 D) ■ □ ● ● E) □ □ ● ○

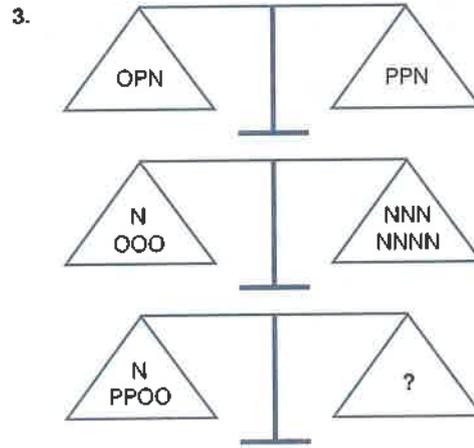
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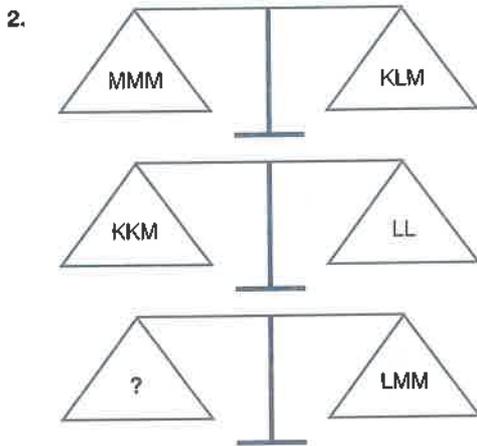
- A) △ △ △ B) △ △ C) △
 D) △ △ △ △ E) △ △ △ △ △



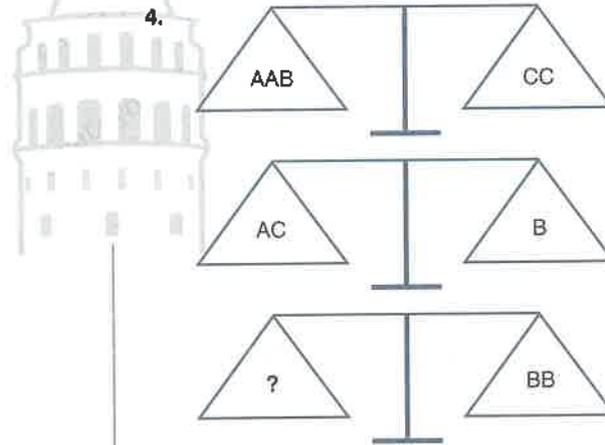
- A) BBB B) CC C) AA
 D) A E) AB



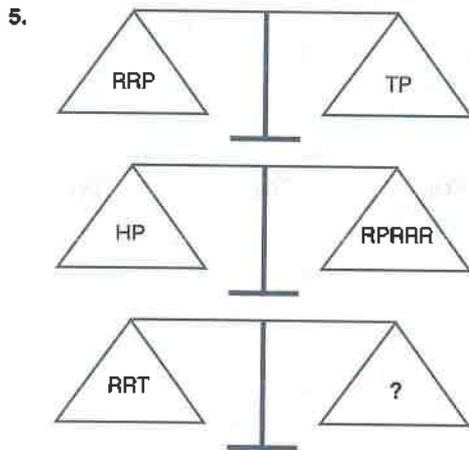
- A) NNPPPP B) OOOPPP C) POOOOP
 D) NNNOOO E) PPPPOO



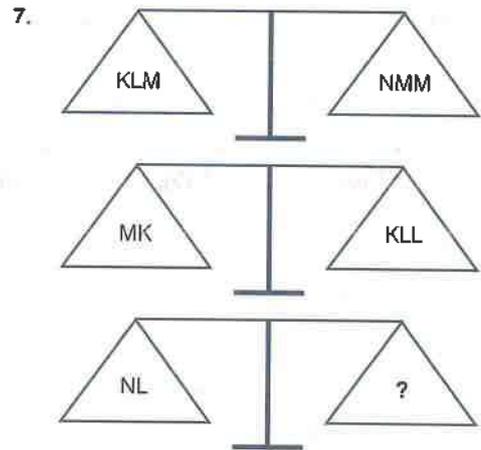
- A) KL B) KKK C) LLLK
 D) KLML E) KKKM



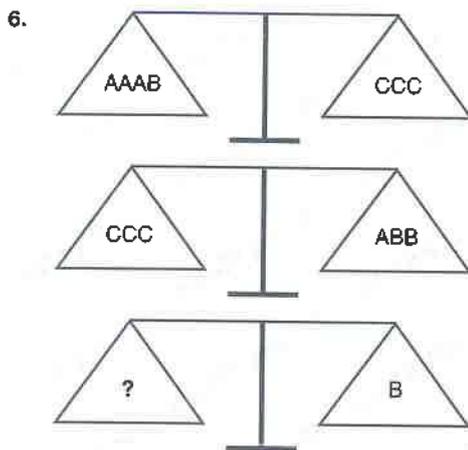
- A) CCC B) CCA C) AAC
 D) AAAB E) ACAC



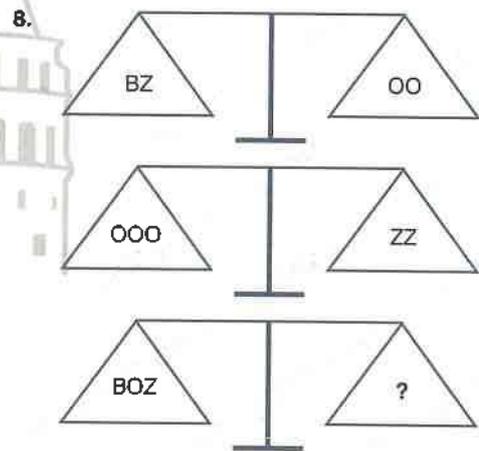
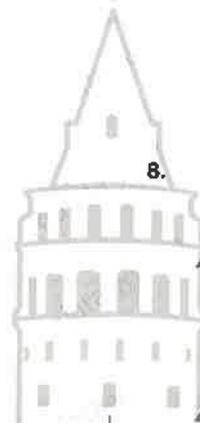
- A) PH
B) HT
C) H
D) TTT
E) RRR



- A) M
B) K
C) KM
D) KK
E) MM

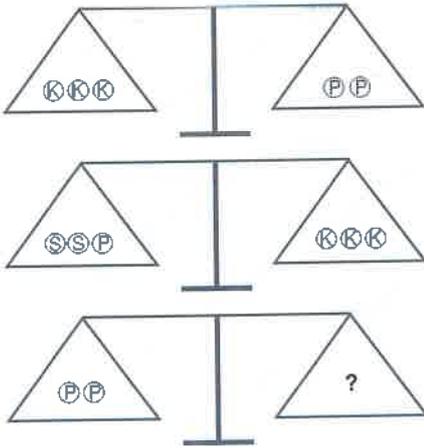


- A) A
B) AA
C) AAA
D) AAAA
E) AAAAA



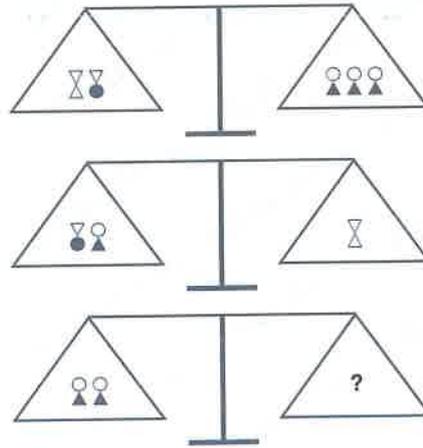
- A) BB
B) OO
C) ZZ
D) OBO
E) BBB

1.



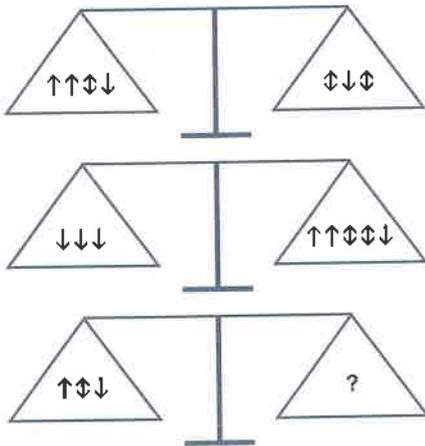
- A) K P B) S S S C) K S S
D) K K K S E) S S S S

3.



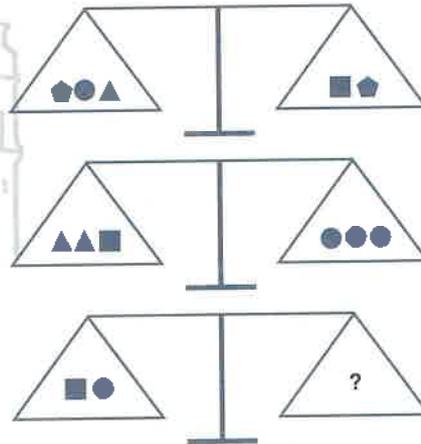
- A) ∇ ● B) ∇ ∇ C) ∇ ∇ ∇
D) ∇ ∇ E) ∇ ● ∇

2.

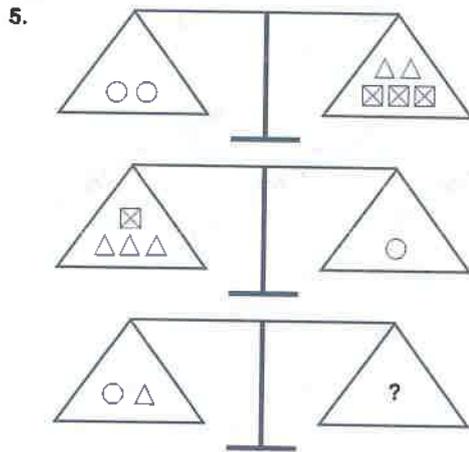


- A) ↑↑↑↑ B) ↑↑↑↑↑ C) ↑↑
D) ↑↑↑ E) ↑↑↑

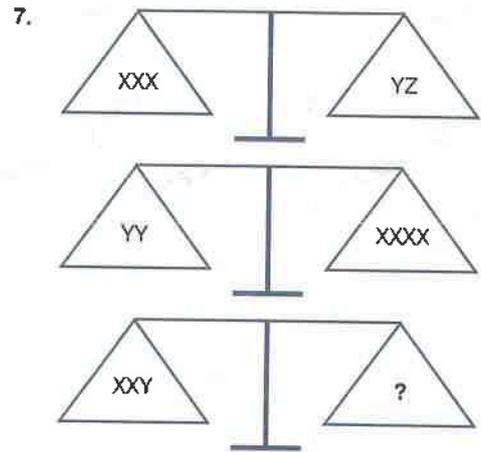
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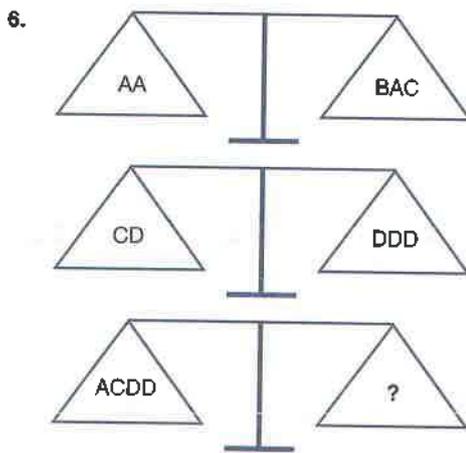
- A) ● ● ● B) ■ ■ ■ C) ▲ ▲ ▲ ▲
D) ● ▲ ● ▲ E) ▲ ▲ ■ ■



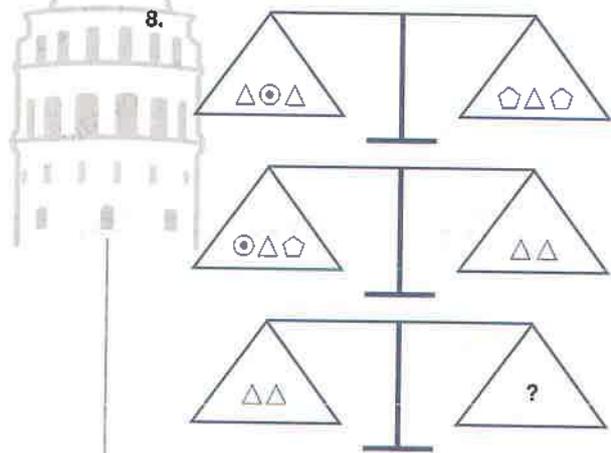
- A) $\square\square$ B) $\circ\circ\circ$ C) $\square\square\square$
 D) $\triangle\triangle\square$ E) $\triangle\triangle\triangle\triangle$



- A) ZZ B) YZ C) YY
 D) XZZ E) YYZ

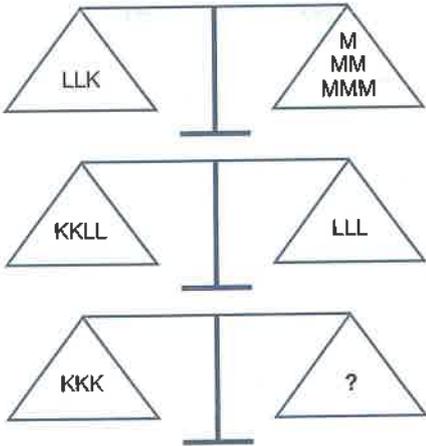


- A) ACCC B) BCCC C) ADDD
 D) BDDD E) DDDD



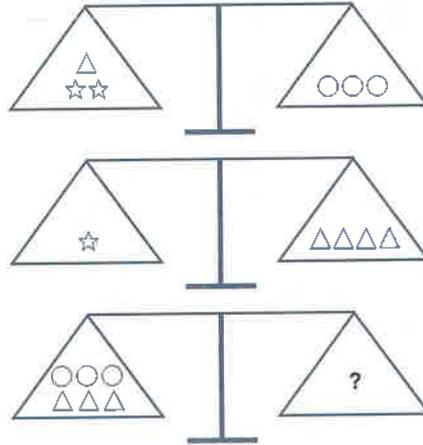
- A) $\odot\triangle$ B) $\triangle\triangle$ C) $\triangle\triangle\triangle$
 D) $\odot\odot\odot$ E) $\odot\odot\triangle$

1.



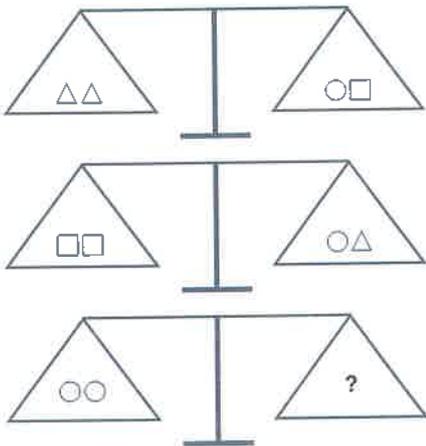
- A) LKKK B) LLKM C) MKK
D) MMMML E) LK

3.



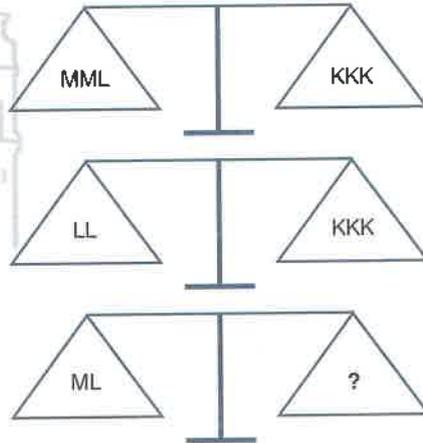
- A) ☆☆☆ B) ☆○△ C) △△○○○
D) ☆☆△△○ E) ○☆○△

2.

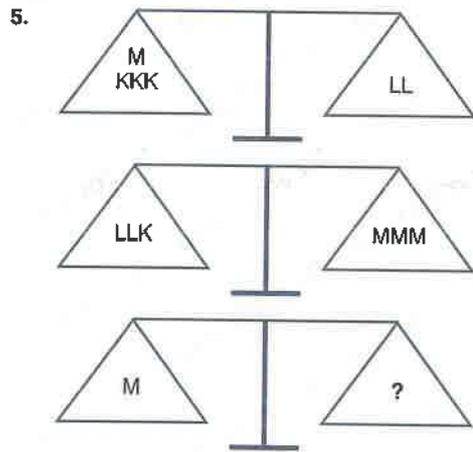


- A) △△○ B) ○□□ C) △△
D) □□□ E) □□△

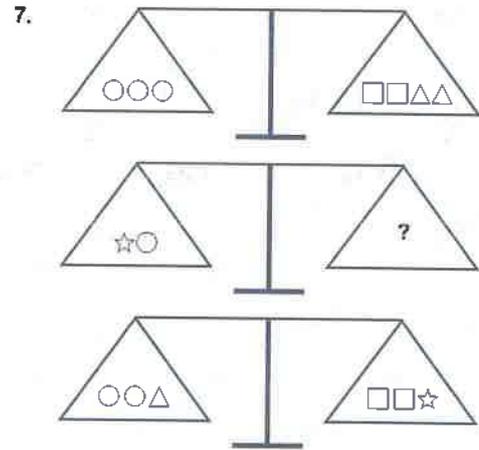
4.



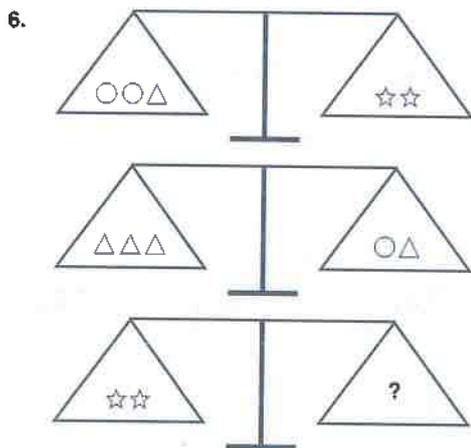
- A) MM B) KK C) KKK
D) MKK E) MMM



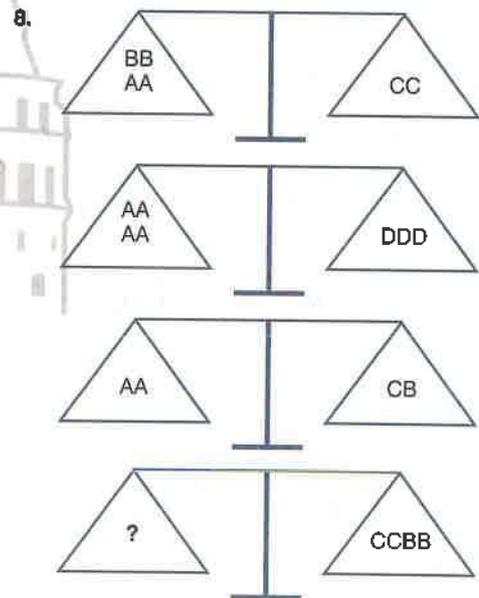
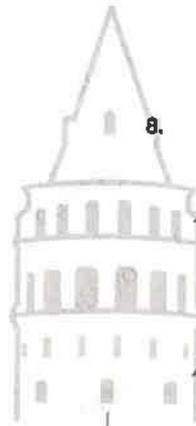
- A) KK B) LL C) KLL
D) KKL E) LLL



- A) $\triangle\triangle$ B) $\triangle\star$ C) $\square\square$
D) $\triangle\triangle\triangle$ E) $\triangle\triangle\star$

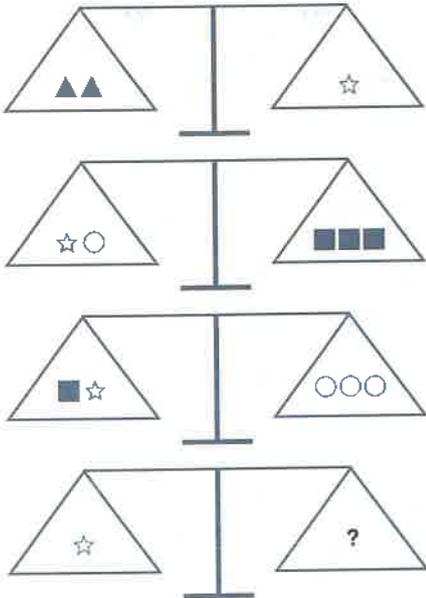


- A) $\triangle\circ\star$ B) $\star\circ\circ$ C) $\circ\triangle\triangle\triangle$
D) $\circ\circ\triangle\triangle$ E) $\triangle\triangle\triangle\triangle$



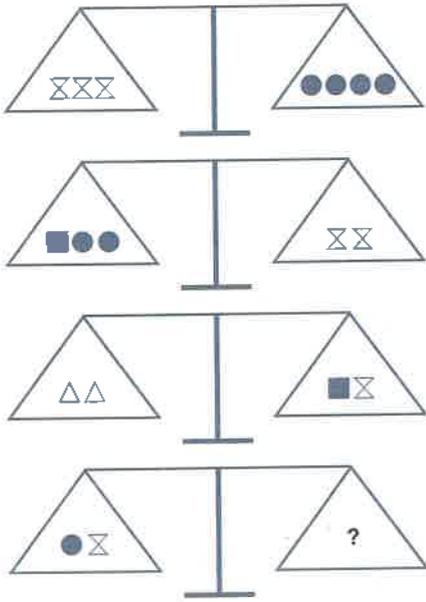
- A) AAD B) DDD C) BDD
D) AABD E) DDDA

1.



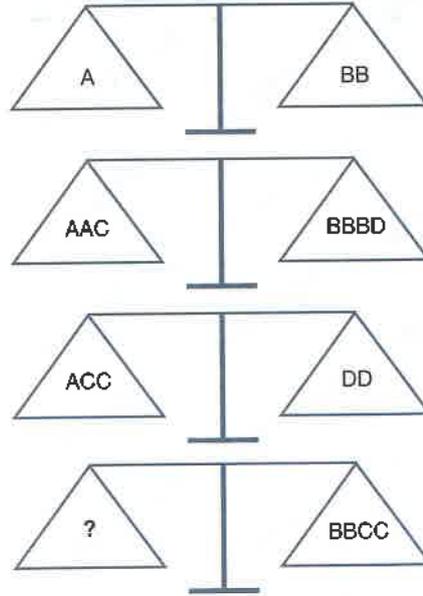
- A) ■ B) ○○ C) ▲○■
D) ○▲○ E) ■○■

2.



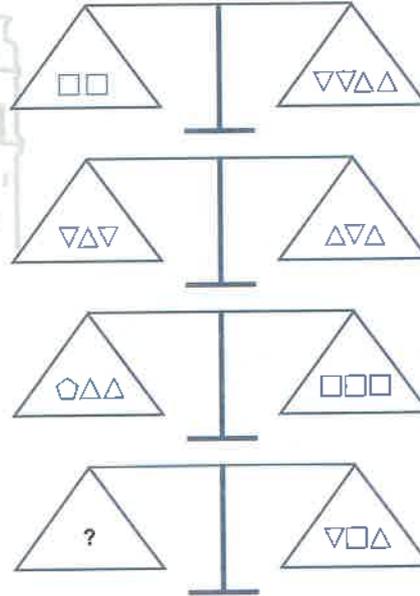
- A) △△ B) ■■ C) △■■■
D) ●●●■ E) ■■■■

3.

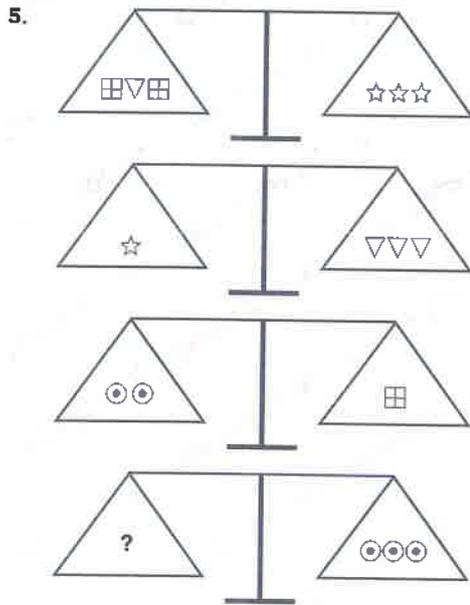


- A) CD B) AC C) BDD
D) DDD E) BCD

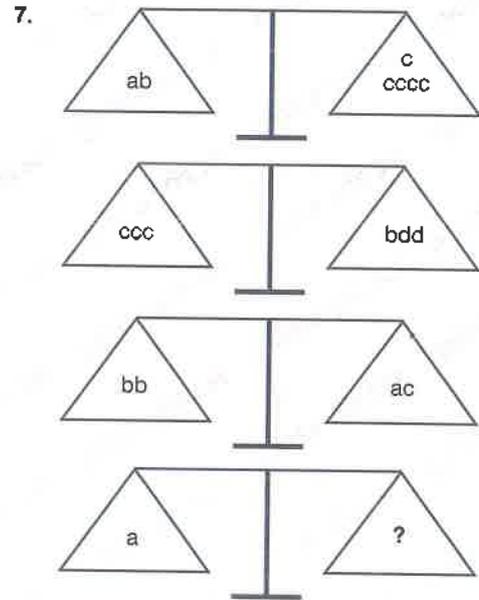
4.



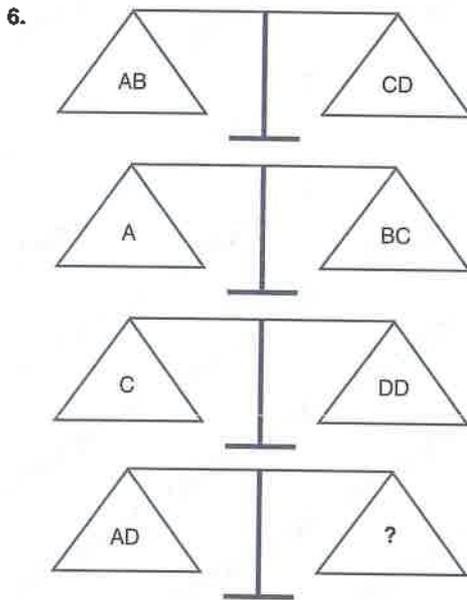
- A) ▽▽▽ B) ○○ C) □□□
D) ◊ E) △△



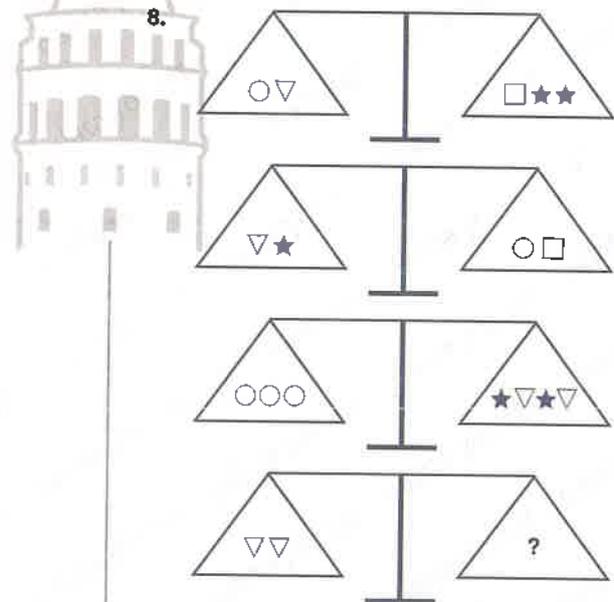
- A) ☆ B) ▽ ▽
 C) ☆ ☆ D) ⊙ ▽ ▽
 E) ⊕ ⊕ ⊕



- A) cd B) cc C) bb
 D) bc E) ddd

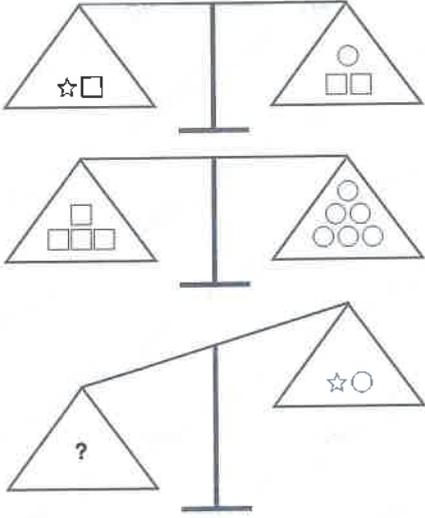


- A) CC B) DDD C) BCC
 D) ABB E) CDD



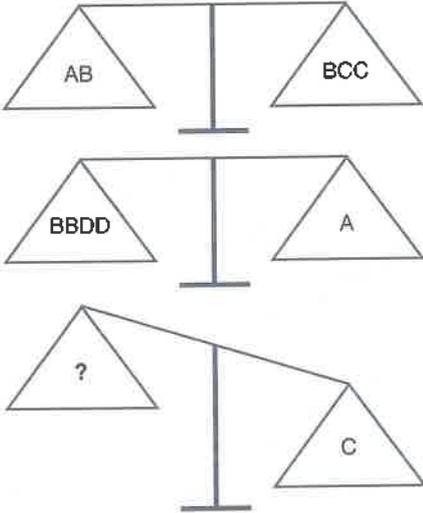
- A) □ ○ B) ○ ☆ C) ☆ ☆
 D) □ □ □ E) ○ ☆ □

1.



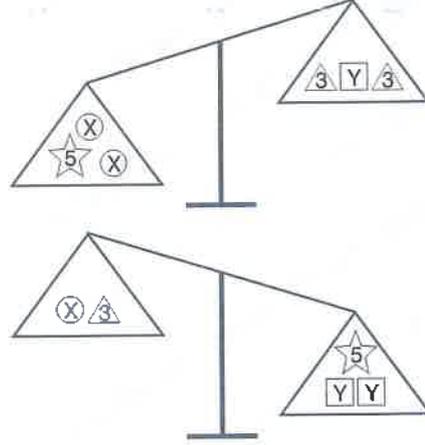
- A) □□ B) ○○○ C) □○○
D) ○○ E) □□□

2.



- A) BD B) AD C) D
D) A E) AA

3.

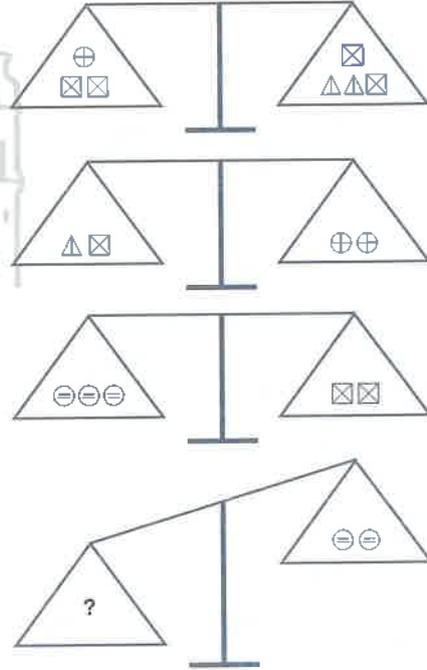


Yukarıdaki terazilerde Y'nin kütlesi 7 ise X'in kütlesi aşağıdakilerden hangisi olabilir?

In the scales above, what is the possible weight of X if the weight of Y is 7?

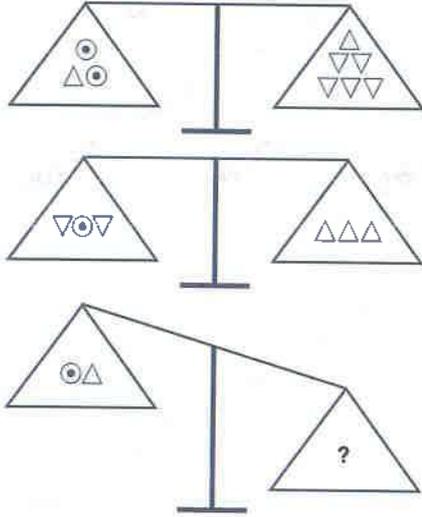
- A) 3 B) 4 C) 6 D) 16 E) 18

4.



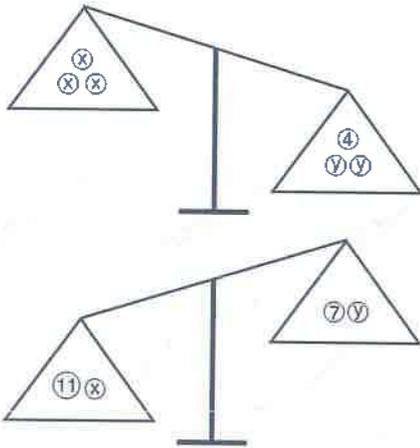
- A) ⊕⊕ B) △△△ C) ⊗△
D) ⊕△⊖ E) △⊖△

5.



- A) $\nabla \Delta$ B) $\Delta \Delta$ C) $\nabla \nabla \nabla$
 D) $\nabla \nabla \nabla \nabla$ E) $\Delta \Delta \Delta$

6.

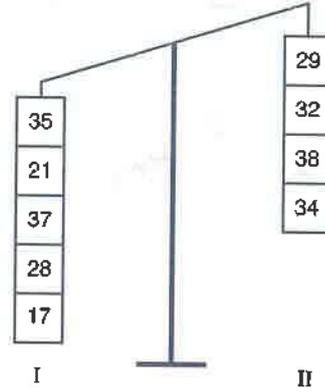


Yukarıdaki terazilerde y'nin kütlesi 10 ise x'in kütlesi aşağıdakilerden hangisi olabilir?

In the scales above, what is the possible weight of x if the weight of y is 10?

- A) 5 B) 6 C) 7 D) 8 E) 9

7.

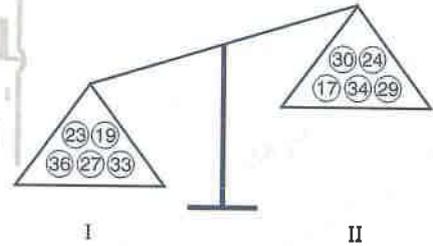


Yukarıdaki terazinin dengede olması için iki taraftan da hangi sayılar çıkartılmalıdır?

What numbers must be removed from both sides for the above scale to be in balance?

- | | I | II |
|----|----|----|
| A) | 35 | 29 |
| B) | 28 | 32 |
| C) | 21 | 16 |
| D) | 37 | 32 |
| E) | 37 | 29 |

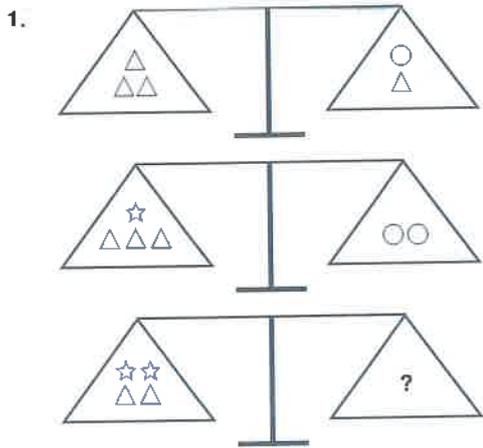
8.



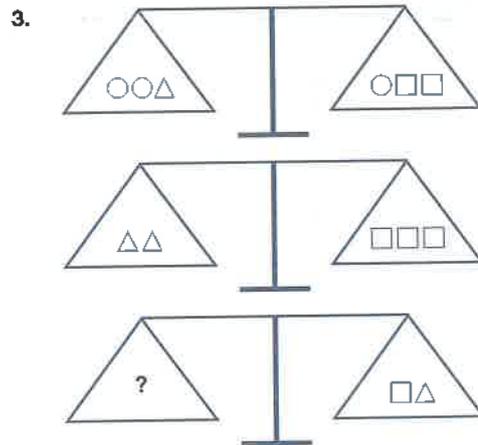
Yukarıdaki terazinin dengede olması için iki tarafa da hangi sayılar eklenmelidir?

What numbers must be added to both sides for the above scale to be in balance?

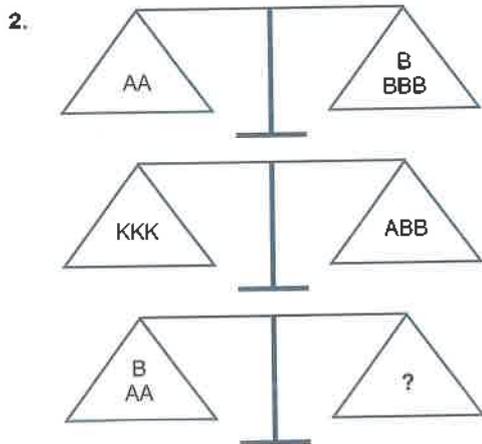
- | | I | II |
|----|----|----|
| A) | 19 | 25 |
| B) | 34 | 30 |
| C) | 22 | 26 |
| D) | 32 | 39 |
| E) | 23 | 17 |



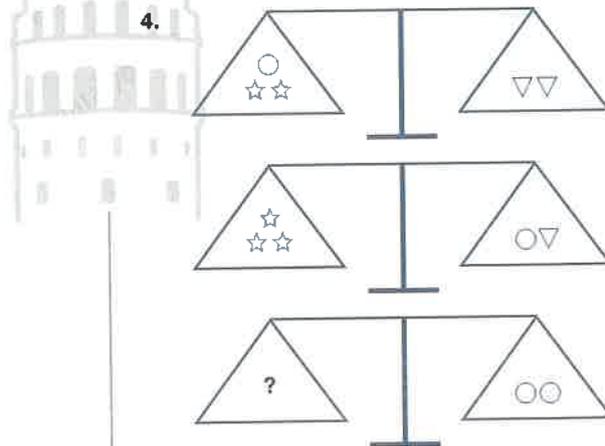
- A) ○○ B) ○○○ C) ○○○☆
 D) ○○○△ E) ○○○☆



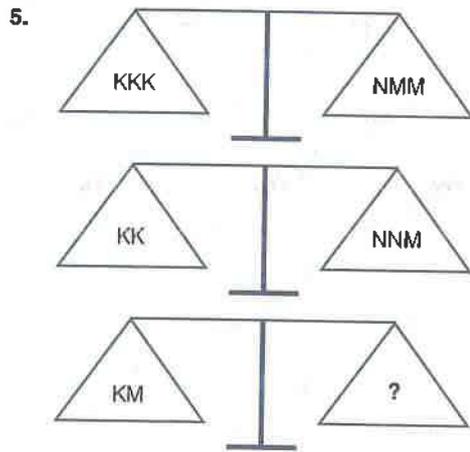
- A) □□ B) ○○ C) ○□
 D) ○○□ E) ○□□



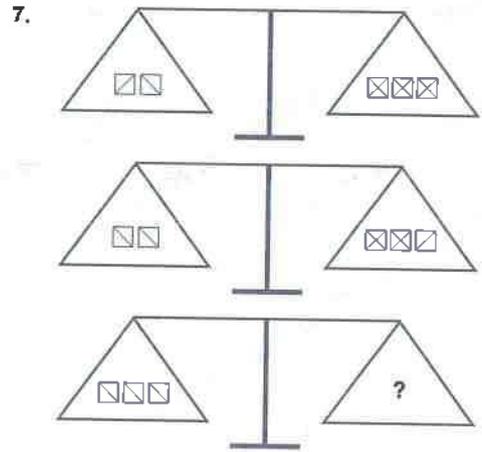
- A) ABK B) BKK C) ABB
 D) ABKK E) BKKK



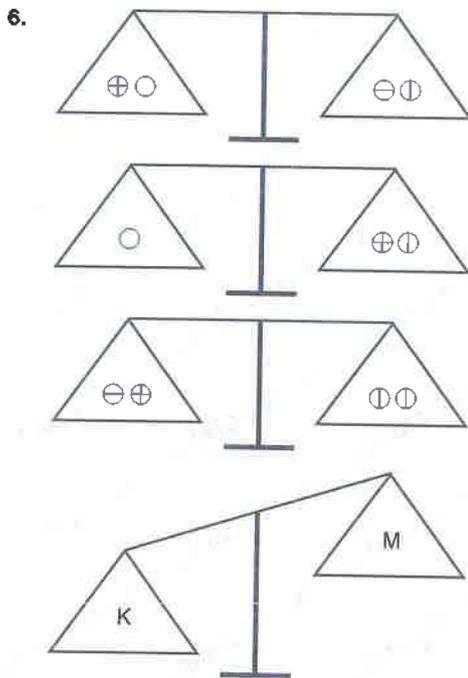
- A) ☆▽ B) ○☆ C) ☆☆☆
 D) ☆▽▽ E) ▽☆☆



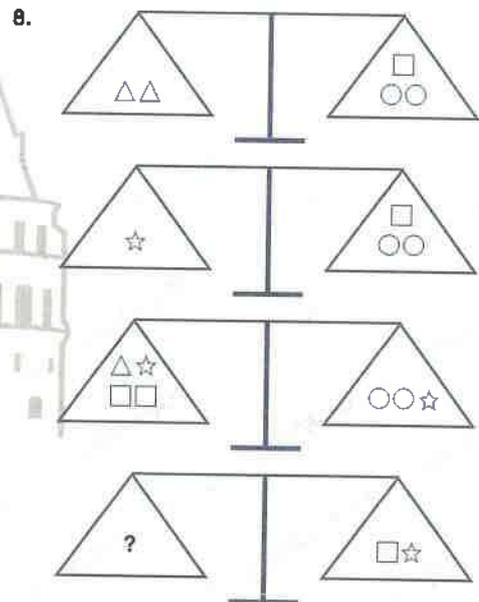
- A) KN B) KKN C) KNN
D) NNN E) NMM



- A) □□□ B) □□□□ C) □□□□□
D) □□□□□ E) □□□□□□

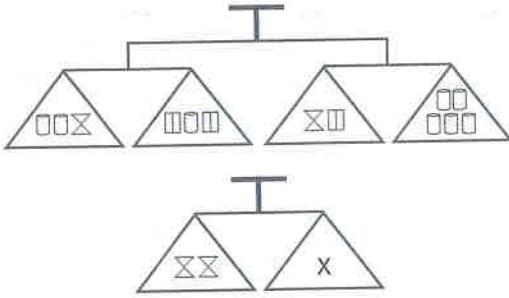


- | | K | M |
|----|-----|-------|
| A) | ○○ | ⊖⊖⊖ |
| B) | ○⊖ | ⊕⊕⊕ |
| C) | ⊕⊕⊕ | ⊖⊖ |
| D) | ⊖⊖⊖ | ⊕⊕⊕⊕ |
| E) | ○○○ | ⊖⊖⊕⊕⊕ |



- A) △ B) △△ C) △△□
D) ○○ E) ○○○

1.

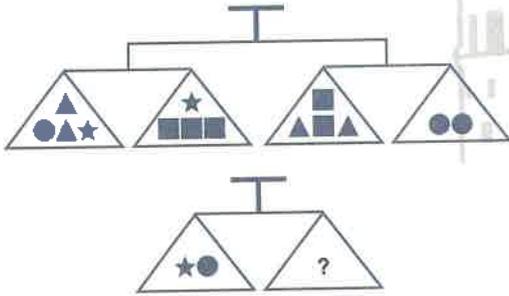


Yukarıdaki teraziler dengede olduğuna göre X yerine aşağıdakilerden hangisi gelmelidir?

If the scales above are all balanced, which of the following should replace X?

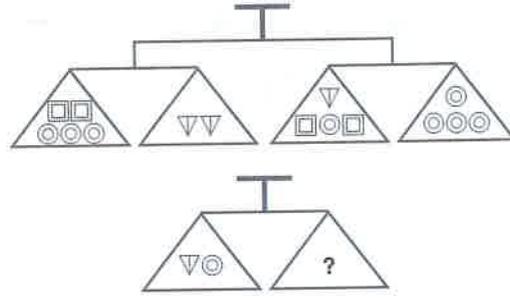
- A) □□□ B) □□X□ C) □□□
D) □□□□ E) X□□

2.



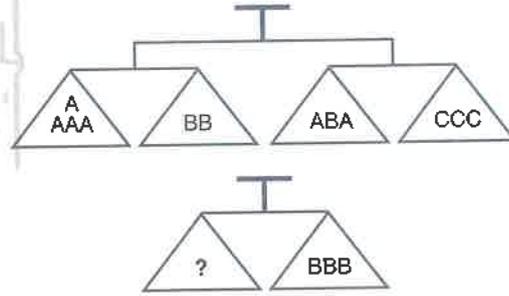
- A) ▲▲ B) ■■ C) ●●●●
D) ▲●■ E) ★★★★★

3.



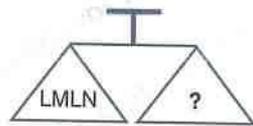
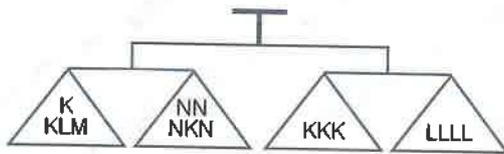
- A) ▽▽ B) □□□ C) ◎□□
D) □◎◎◎ E) ◎◎□□

4.



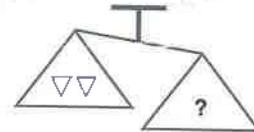
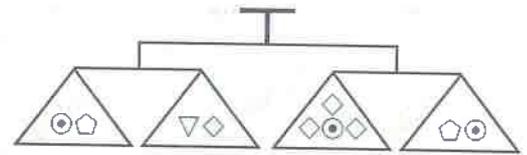
- A) BCC B) AAAC C) AAAB
D) ACACC E) AABCC

5.



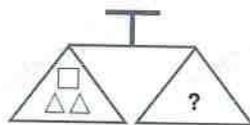
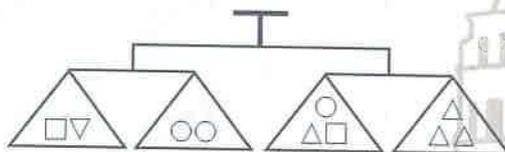
- A) KLM B) NNN C) KKM
D) MMMN E) KLL

7.



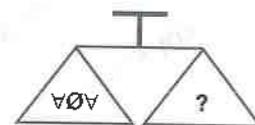
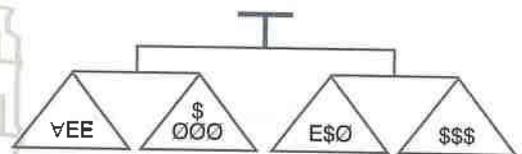
- A) ●●●● B) ◻●◻ C) ◊◊◊◊
D) ◻◻◻◻ E) ◊◊◊●●

6.

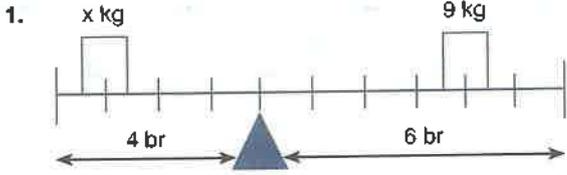


- A) ◻◻◻ B) ○○ C) ◻▽
D) ○◻ E) ▽

8.



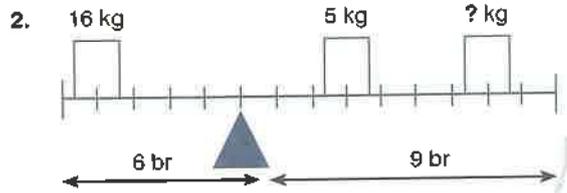
- A) EE B) \$\$ C) E
D) \$ E) E\$



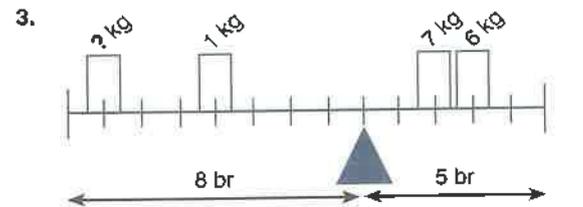
Yukarıdaki terazinin dengede kalması için x yerine hangi ağırlık gelmelidir?

Which weight should be put in the place of x to keep the scale above in balance?

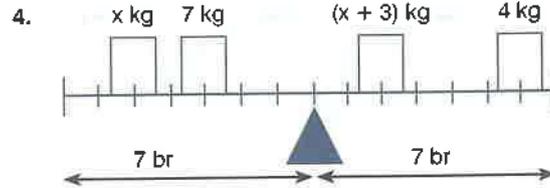
- A) 6 B) 8 C) 10 D) 12 E) 15



- A) 3 B) 4 C) 6 D) 7 E) 8



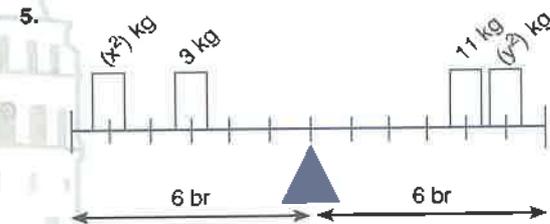
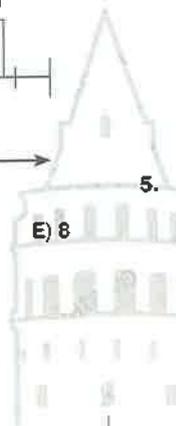
- A) 3 B) 4 C) 5 D) 6 E) 7



Yukarıdaki terazinin dengede kalması için x yerine hangi ağırlık gelmelidir?

Which weight should be put in the place of x to keep the scale above in balance?

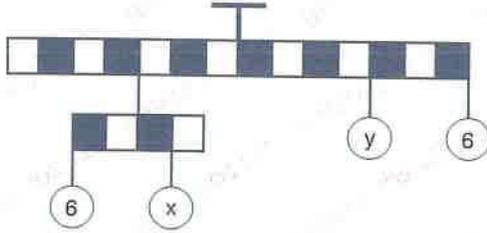
- A) 8 B) 6 C) 5 D) 4 E) 3



$$= x^2 + y^2 = ?$$

- A) 20 B) 25 C) 34 D) 36 E) 40

6.

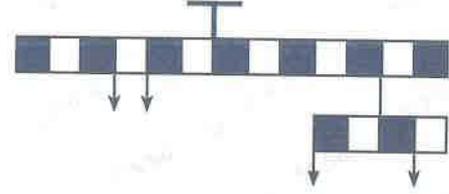


Yukarıdaki terazinin dengesinin bozulmaması için $x + y$ ağırlığı yerine kaç gelmelidir?

Which weight should be used for $x + y$ in order to keep the scale above in balance?

- A) 10 B) 12 C) 15 D) 18 E) 20

8.

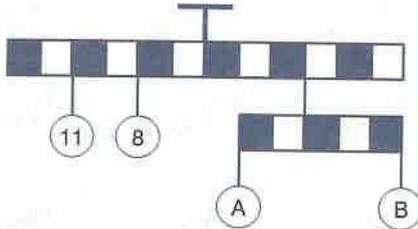


2, 3, 4, 5 ve 8 kg'lık ağırlıklardan dördü yukarıda dengede duran terazinin kollarına yerleştirilecektir. Dengenin bozulmaması için hangi ağırlık kullanılmamalıdır?

Four of the weights 2, 3, 4, 5 and 8 kg will be placed in the arms of the scale above which is initially at balance. To keep this balance, which weight should not be used?

- A) 2 B) 3 C) 4 D) 5 E) 8

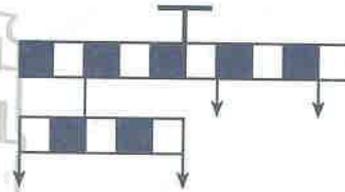
7.



$$\Rightarrow 2A - B = ?$$

- A) 8 B) 10 C) 12 D) 15 E) 16

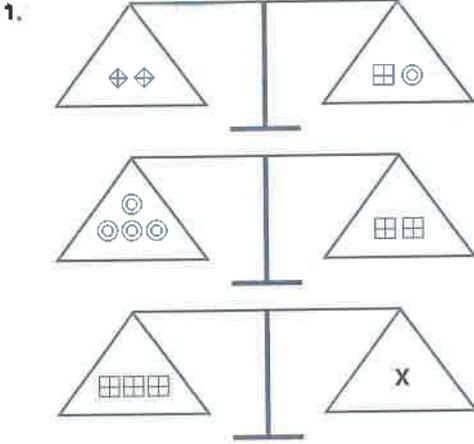
9.



2, 3, 4, 6 ve 7 kg'lık ağırlıklardan dördü yukarıda dengede duran terazinin kollarına yerleştirilecektir. Dengenin bozulmaması için hangi ağırlık kullanılmamalıdır?

Four of the weights 2, 3, 4, 6 and 7 kg will be placed in the arms of the scale above which is initially at balance. To keep this balance, which weight should not be used?

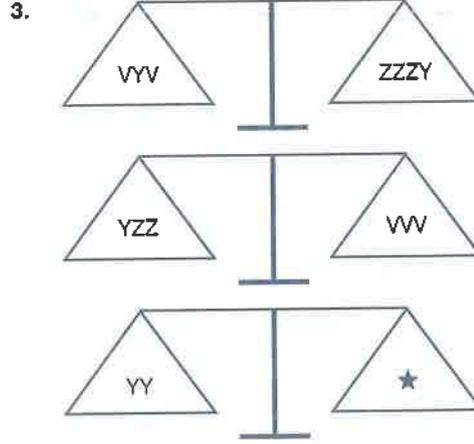
- A) 2 B) 3 C) 4 D) 6 E) 7



Yukarıdaki şekle göre aşağıdaki yargılardan hangisi veya hangileri doğrudur?

Which one(s) of the following statements is/are true according to the figure?

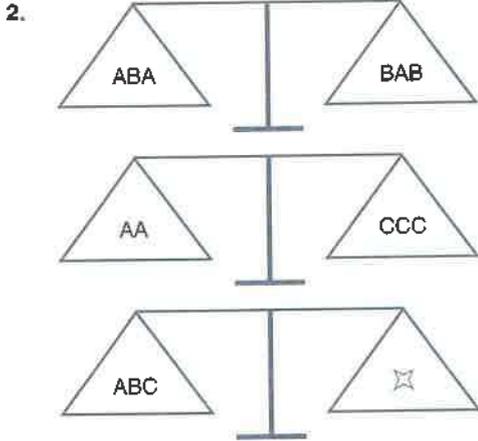
- I. $X = \text{circle} \text{ circle} \text{ circle} \text{ circle}$
 - II. $X = \text{square} \text{ circle} \text{ diamond} \text{ diamond}$
 - III. $X = \text{diamond} \text{ diamond} \text{ diamond} \text{ diamond}$
- A) I, II B) II C) III D) II, III E) I, III



Yukarıdaki şekle göre aşağıdaki yargılardan hangisi veya hangileri doğrudur?

Which one(s) of the following statements is/are true according to the figure?

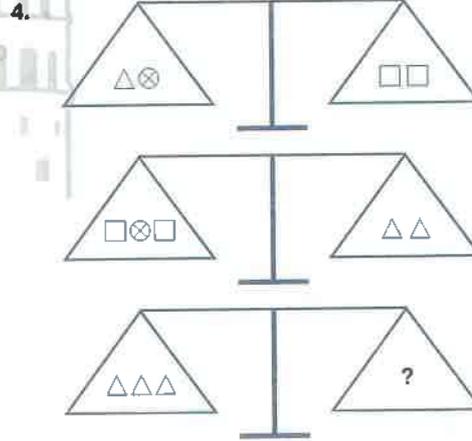
- I. $\star = ZZZ$
 - II. $\star = VYZ$
 - III. $\star = YZZ$
 - IV. $\star = VZZ$
- A) I, II B) II C) III, IV D) IV E) II, IV



Yukarıdaki şekle göre aşağıdaki yargılardan hangisi veya hangileri doğrudur?

Which one(s) of the following statements is/are true according to the figure?

- I. $\star = ABAB$
 - II. $\star = BCC$
 - III. $\star = CCCC$
- A) I B) II C) III D) I, II E) II, III

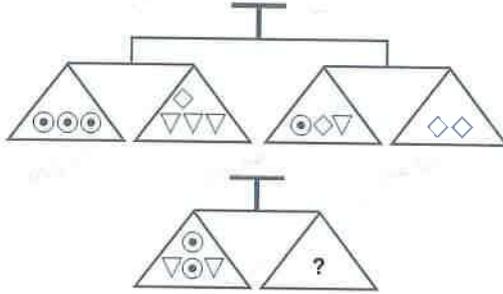


Yukarıdaki şekle göre aşağıdaki yargılardan hangisi veya hangileri doğrudur?

Which one(s) of the following statements is/are true according to the figure?

- I. $? = \square \square \square \triangle$
 - II. $? = \text{circle} \triangle \square \square$
 - III. $? = \triangle \text{circle} \square \text{circle}$
- A) I B) II C) III D) I, II E) II, III

5.



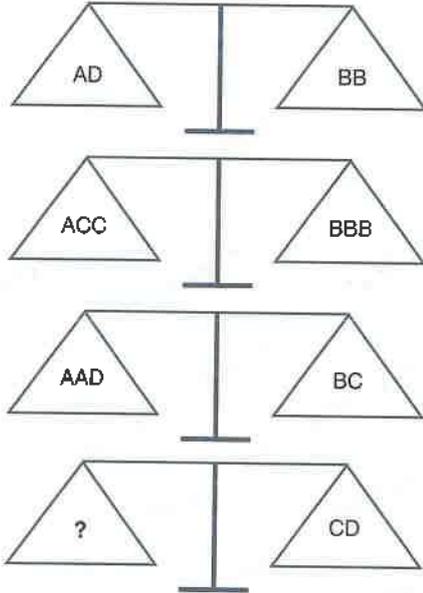
Yukarıdaki şekle göre aşağıdaki yargılardan hangisi veya hangileri doğrudur?

Which one(s) of the following statements is/are true according to the figure?

- I. ? = $\nabla \diamond \nabla \nabla$
- II. ? = $\odot \odot \odot$
- III. ? = $\diamond \diamond$
- IV. ? = $\nabla \nabla \odot \diamond$

- A) I, II, III B) II, III C) I, II, IV
D) I, II E) Hepsi (All of them)

6.



Yukarıdaki şekle göre aşağıdaki yargılardan hangisi veya hangileri doğrudur?

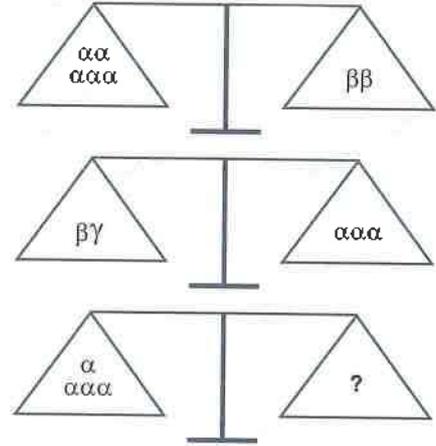
Which one(s) of the following statements is/are true according to the figure?

- I. ? = ABC
- II. ? = CAC
- III. ? = ABD

- A) I, II B) II C) II, III D) III E) I, III

5 - A

7.



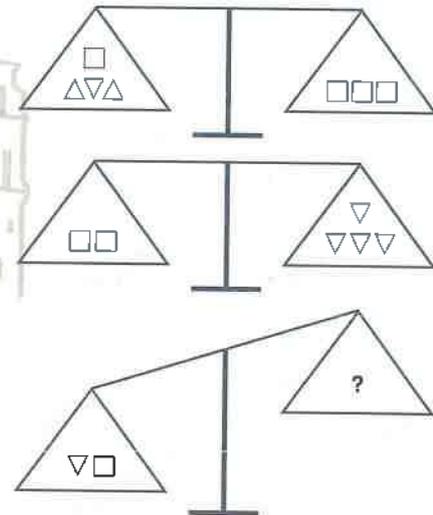
Yukarıdaki şekle göre aşağıdaki yargılardan hangisi/hangileri doğru değildir?

Which one(s) of the following statements is/are not true according to the figure?

- I. ? = $\beta\gamma\gamma$
- II. ? = $\alpha\beta\gamma$
- III. ? = $\alpha\alpha\beta$

- A) I, III B) III C) II D) I, II E) II, III

8.



Yukarıdaki şekle göre aşağıdaki yargılardan hangisi/hangileri doğru değildir?

Which one(s) of the following statements is/are not true according to the figure?

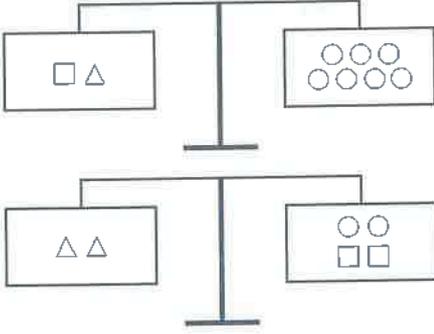
- I. ? = $\nabla \nabla \nabla \nabla$
- II. ? = $\triangle \nabla$
- III. ? = $\triangle \square$

- A) I B) II C) III D) I, III E) II, III

7 - A

8 - D

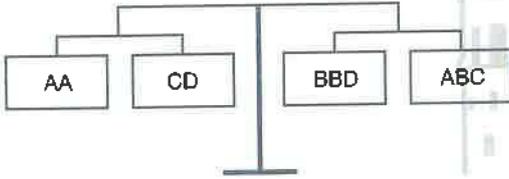
1.



$\Rightarrow \Delta + \square - \bigcirc = ?$

- A) \bigcirc B) \square C) $\square\square$
 D) $\bigcirc\bigcirc$ E) $\bigcirc\bigcirc\bigcirc\bigcirc$

2.

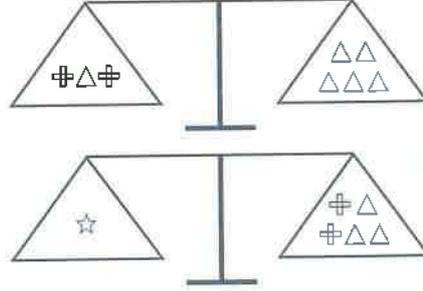


$\Rightarrow B - C + D = ?$

- A) A B) BB C) CC D) D E) AB

3. ve 4. soruları aşağıda verilen denge halindeki terazilere göre cevaplayınız.

Answer questions 3 and 4 according to the balanced scales below.



3. $\Rightarrow \star - \Delta = ?$

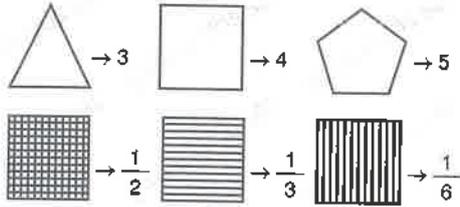
- A) $\Delta\Delta\Delta$ B) $\Delta\Delta\Delta\Delta$ C) $\oplus\oplus$
 D) $\oplus\oplus\oplus$ E) $\Delta\Delta\oplus$

4. $\Rightarrow \star + \oplus = ?$

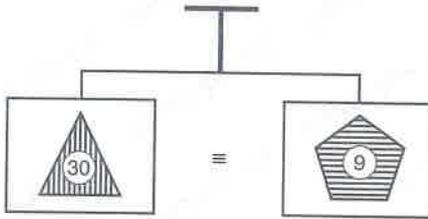
- A) $\oplus\oplus\oplus$ B) $\star\star$ C) $\Delta\oplus\Delta$
 $\Delta\oplus\Delta$
 D) $\oplus\oplus\oplus\oplus$ E) $\Delta\Delta\Delta$
 $\oplus\oplus\oplus$

5. - 7. terazi sorularını aşağıdaki bilgilere göre cevaplayınız.

Answer questions 5 - 7 of scales according to the given information below.

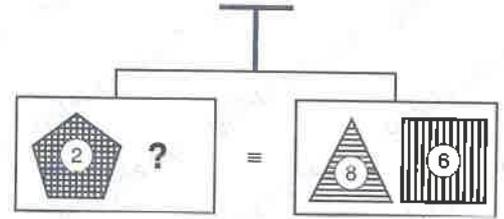


Örnek(Example):



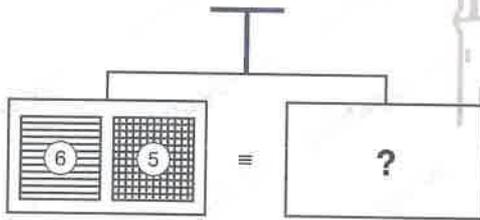
$$30 \times 3 \times \frac{1}{6} = 9 \times 5 \times \frac{1}{3} (=15)$$

6.



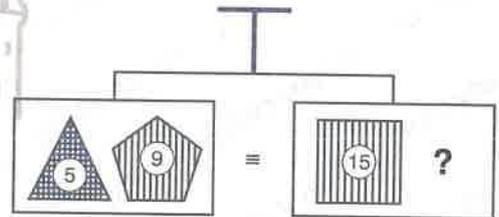
- A) $\text{grid square} (7)$ B) $\triangle (14)$ C) $\triangle (12)$
 D) $\text{horizontal lines square} (21)$ E) $\text{pentagon} (21)$

5.

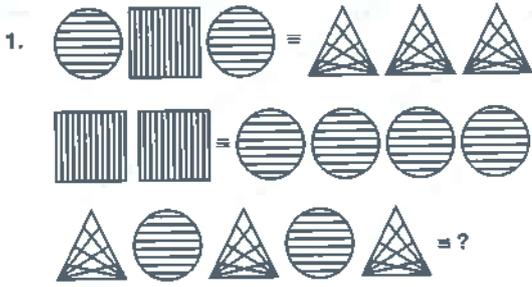


- A) $\text{vertical lines square} (24)$ B) $\text{pentagon} (16)$ C) $\triangle (20)$
 D) $\text{horizontal lines square} (18)$ E) $\triangle (36)$

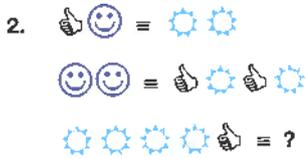
7.



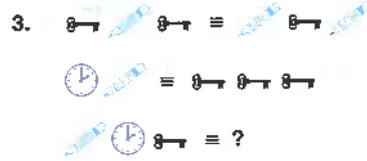
- A) $\text{pentagon} (4)$ B) $\triangle (5)$ C) $\triangle (3)$
 D) $\text{pentagon} (2)$ E) $\text{horizontal lines square} (6)$



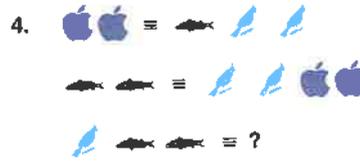
- A)
- B)
- C)
- D)
- E)



- A)
- B)
- C)
- D)
- E)



- A)
- B)
- C)
- D)
- E)



- A)
- B)
- C)
- D)
- E)

5. $\int\int = \int\int\int$

$\int\int = \int\int$

$\int\int\int = ?$

- A) $\int\int\int$ B) $\int\int\int$ C) $\int\int\int\int$

- D) $\int\int\int\int$ E) $\int\int\int$

6.

+	KK	MM
M	LLLLL	
LL		KKKK

$\Rightarrow KKKKLL = ?$

- A) MMM B) MMMM C) MMMMM
 D) MMM
 MMM E) MMMM
 MMMM

7.

+	⊙	▽	☆
☆	⊙⊙⊙		
⊙⊙		⊗⊗	
⊗			☆⊙☆

$\Rightarrow ☆ + ⊗ + ▽ = ?$

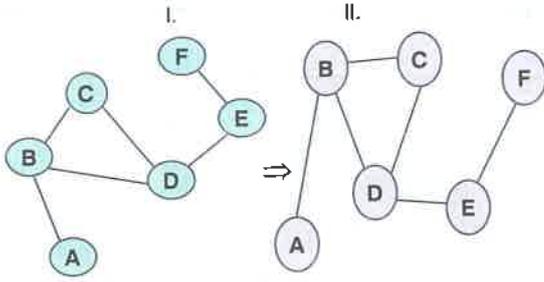
- A) ⊗⊗⊗ B) ⊙⊙⊙⊙⊙ C) ▽▽
 D) ☆☆☆⊙⊙ E) ⊗⊗▽

8.

+	⊠	⊕⊕
⊕⊕		⊠⊠
⊕	⊕⊕⊕	

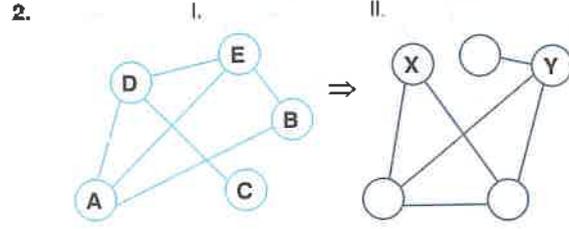
$\Rightarrow ⊕ + ⊕ + ⊠ = ?$

- A) ⊕⊕ B) ⊕⊕⊕ C) ⊕⊕⊕
 D) ⊠⊠ E) ⊕⊕⊕



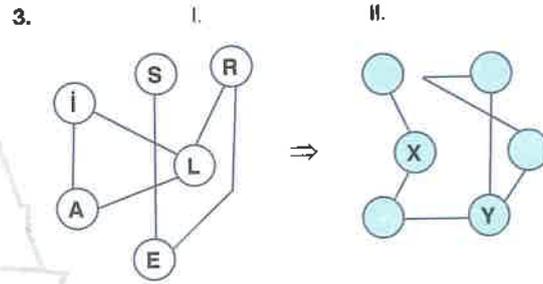
I. Şekil, birbirine bağlanan harfler ve bu harfler arasındaki bağlantı sayıları değişmeyecek şekilde yeniden düzenlenirse II. şekil elde ediliyor.

The letters in figure I are rearranged in figure II in a way that there is no change in the order or the number of links between the letters.



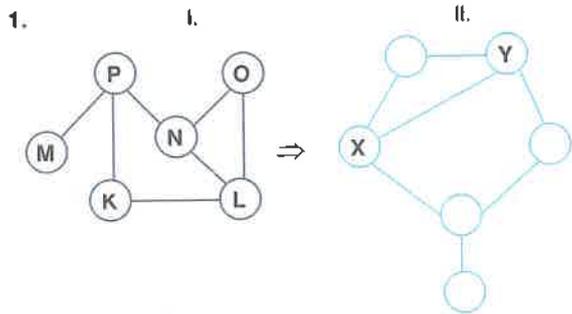
X; Y = ? ; ?

- A) E; D B) A; D C) B; D
D) A; E E) D; C



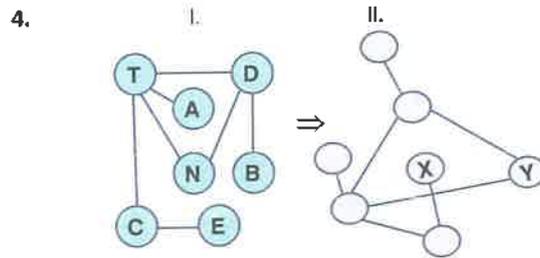
X; Y = ? ; ?

- A) E;A B) L;i C) R;L
D) E;R E) E;L



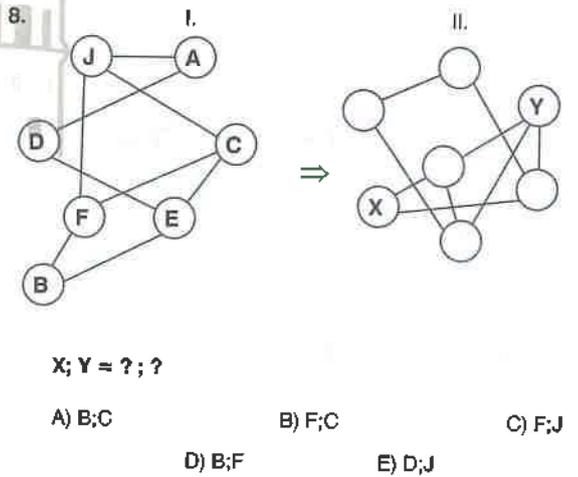
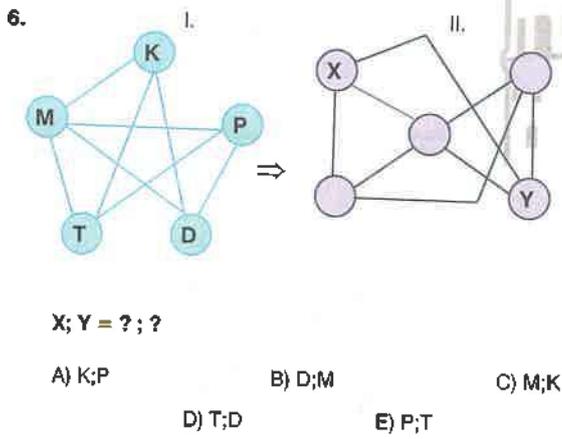
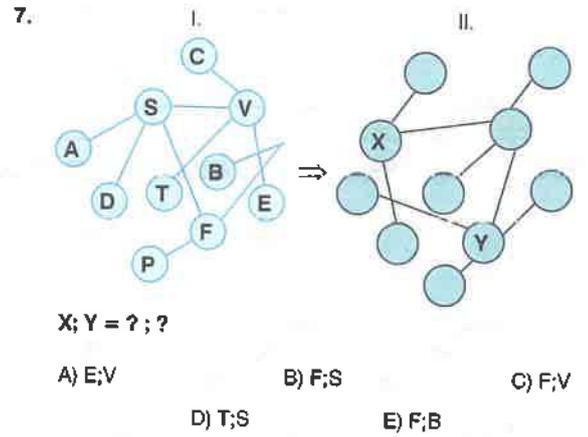
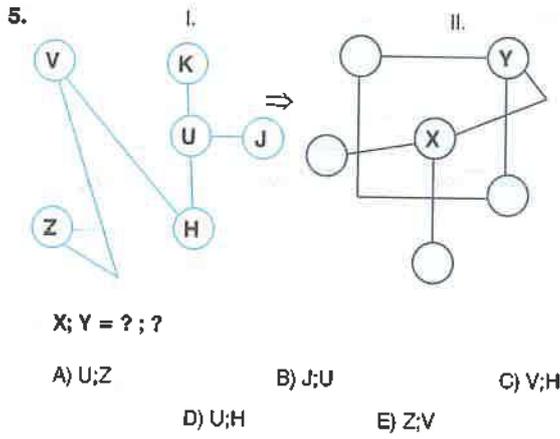
X; Y = ? ; ?

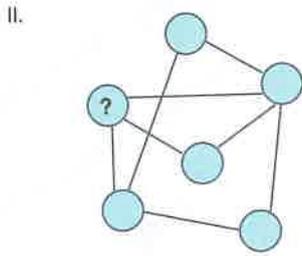
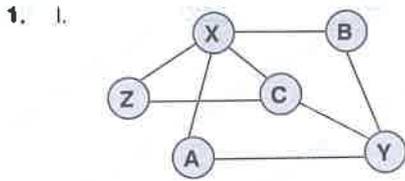
- A) N;O B) P;N C) L;P
D) N;L E) L;K



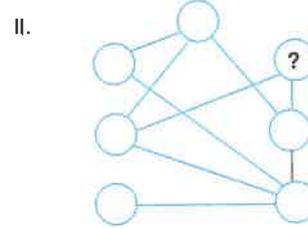
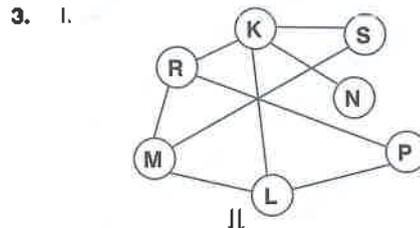
X; Y = ? ; ?

- A) A;D B) E;N C) B;N
D) E;D E) A;N

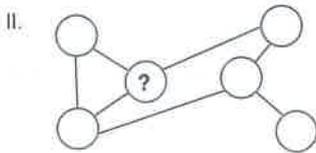
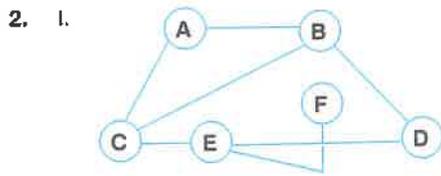




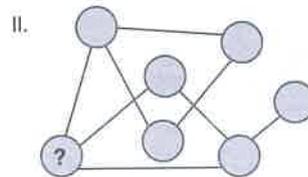
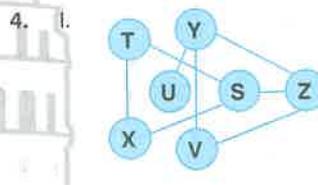
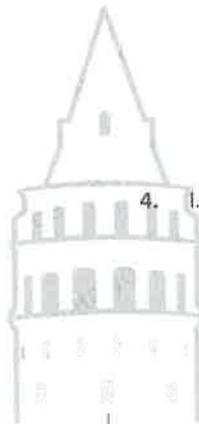
- A) Y B) X C) Z D) B E) C



- A) L B) R C) S D) M E) P

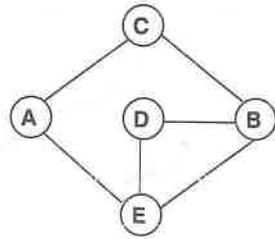


- A) D B) E C) A D) B E) C

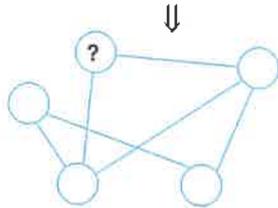


- A) X B) Y C) Z D) V E) S

5. I.

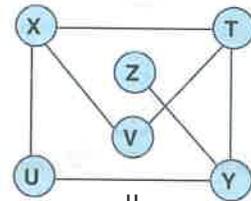


II.

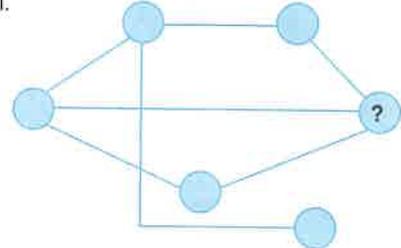


- A) E B) A C) B D) C E) D

7. I.

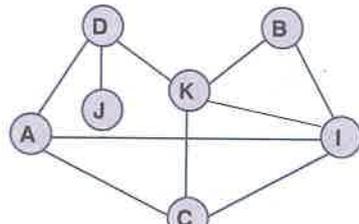


II.

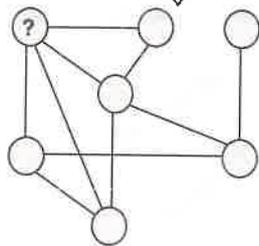


- A) V B) U C) T D) X E) Y

6. I.

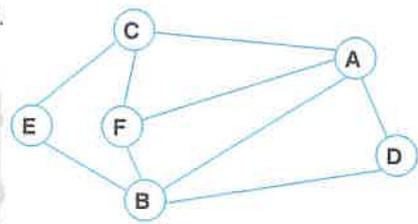


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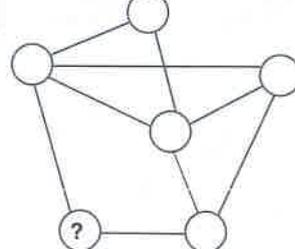


- A) K B) I C) B D) J E) C

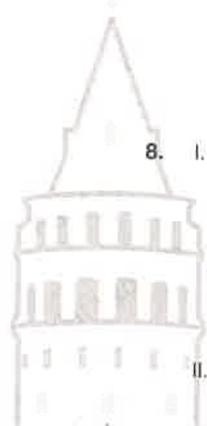
8. I.



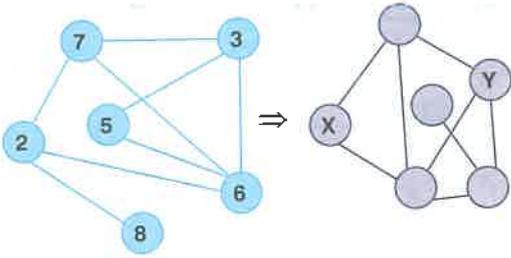
II.



- A) E B) A C) B D) C E) D



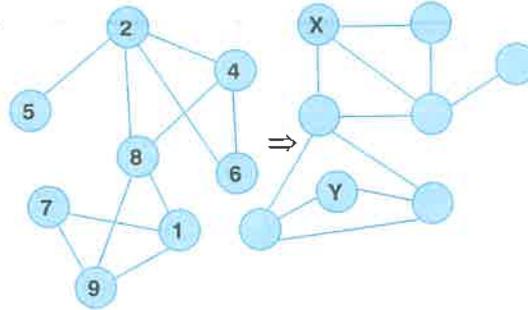
1.



X = ?, Y = ?

- A) 5,3 B) 3,7 C) 3,2
D) 5,2 E) 5,7

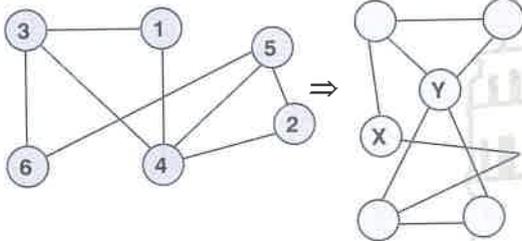
3.



X = ?, Y = ?

- A) 1,6 B) 4,1 C) 4,7
D) 1,7 E) 6,9

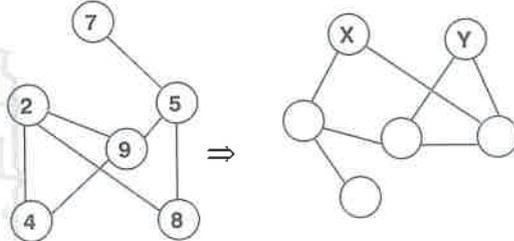
2.



X = ?, Y = ?

- A) 6,2 B) 2,3 C) 3,4
D) 6,4 E) 4,2

4.



X = ?, Y = ?

- A) 4,8 B) 9,8 C) 8,9
D) 8,4 E) 2,5

TEST 3

Eşleştirme / Matching

5.

$X = ? , Y = ?$

A) 1,9 B) 2,7 C) 9,4
D) 6,9 E) 6,7

7.

$X = ? , Y = ?$

A) 5,3 B) 9,3 C) 5,9
D) 6,9 E) 6,7

6.

$X = ? , Y = ?$

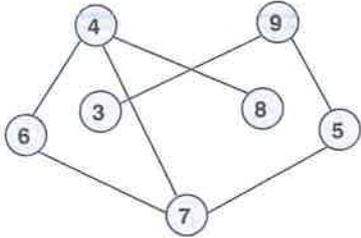
A) 5,4 B) 3,5 C) 3,6
D) 1,6 E) 3,4

8.

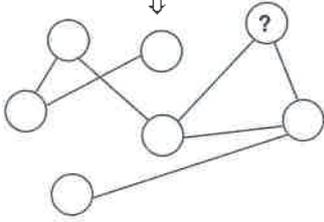
$X = ? , Y = ?$

A) 8,2 B) 5,7 C) 5,2
D) 8,7 E) 5,1

1. I.

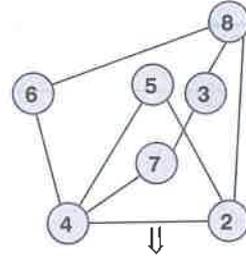


II.

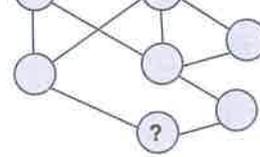


- A) 4 B) 5 C) 6 D) 7 E) 9

3. I.

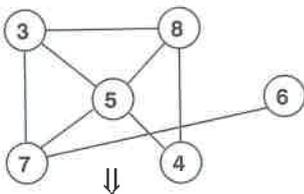


II.

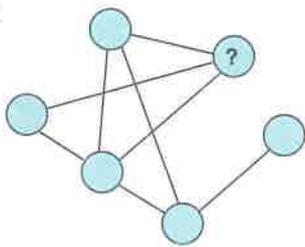


- A) 2 B) 3 C) 5 D) 6 E) 7

2. I.

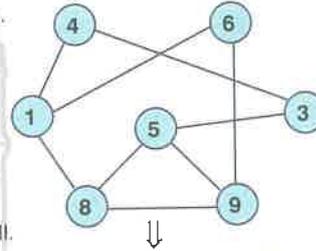


II.

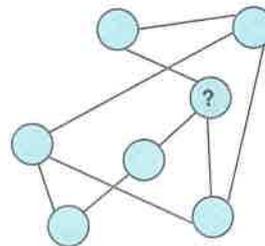


- A) 3 B) 4 C) 5 D) 7 E) 8

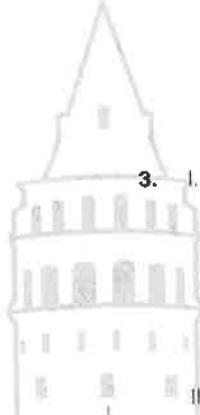
3. I.



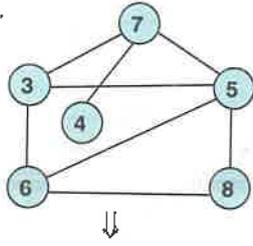
II.



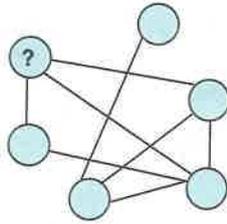
- A) 1 B) 3 C) 5 D) 8 E) 9



5. I.

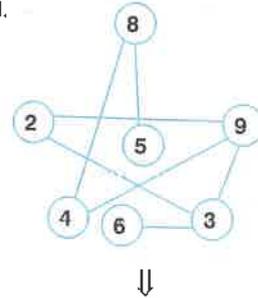


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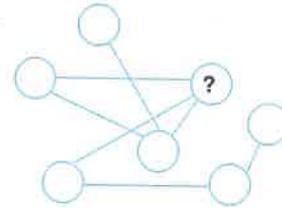


- A) 3 B) 5 C) 6 D) 7 E) 8

7. I.

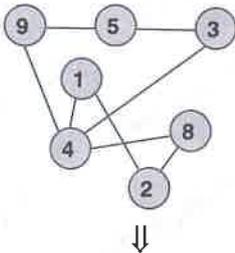


II.

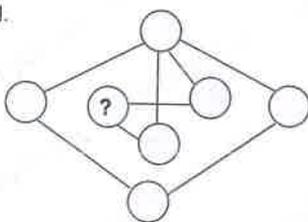


- A) 2 B) 3 C) 4 D) 8 E) 9

6. I.

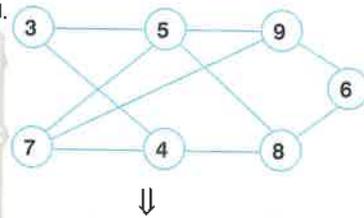


II.

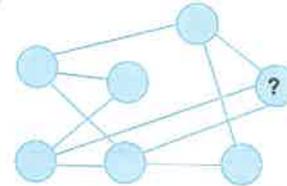


- A) 1 B) 2 C) 3 D) 8 E) 9

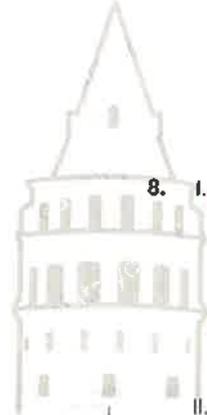
8. I.

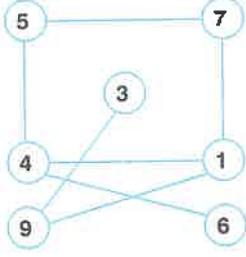


II.



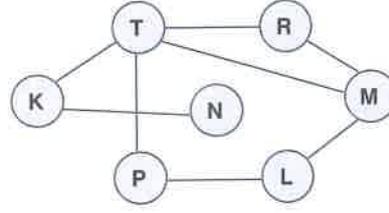
- A) 4 B) 6 C) 7 D) 8 E) 9





Yukarıdaki şekle göre 1. ve 2. soruları cevaplayınız.

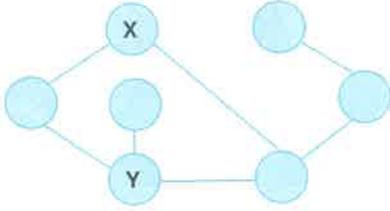
Answer questions 1 and 2 according to the figure above.



Yukarıdaki şekle göre 3. ve 4. soruları cevaplayınız.

Answer questions 3 and 4 according to the figure above.

1.



$\Rightarrow X = ?, Y = ?$

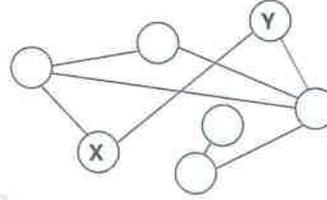
A) 9;4

B) 7;1

D) 9;1

E) 9;7

3.



$\Rightarrow X = ?, Y = ?$

A) R;M

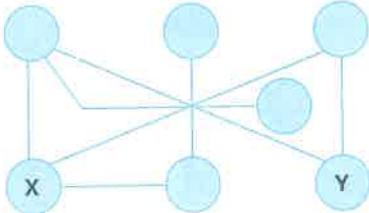
B) L;P

C) P;R

D) M;R

E) P;L

2.



$\Rightarrow X = ?, Y = ?$

A) 4;7

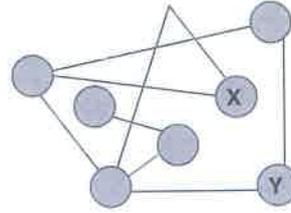
B) 1;9

C) 4;9

D) 1;5

E) 7;5

4.



$\Rightarrow X = ?, Y = ?$

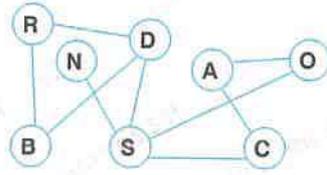
A) M;P

B) L;R

C) L;M

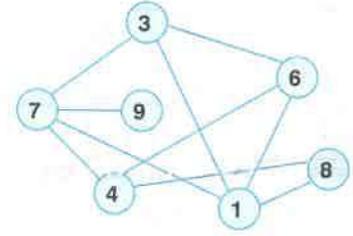
D) R;L

E) R;P



Yukarıdaki şekle göre 5. ve 6. soruları cevaplayınız.

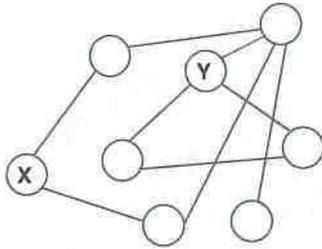
Answer questions 5 and 6 according to the figure above.



Yukarıdaki şekle göre 7. ve 8. soruları cevaplayınız.

Answer questions 7 and 8 according to the figure above.

5.



⇒ X = ?, Y = ?

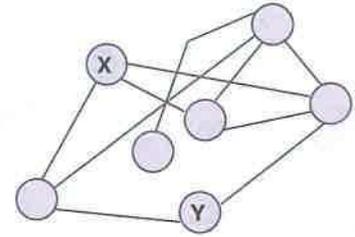
A) R;C

B) B;C

D) B;D

E) A;D

7.



⇒ X = ?, Y = ?

C) O;B

A) 4;9

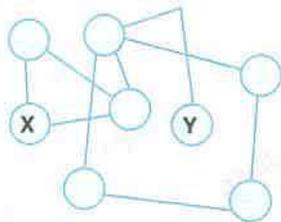
D) 6;3

B) 6;8

E) 4;8

C) 3;1

6.



⇒ X = ?, Y = ?

A) R;O

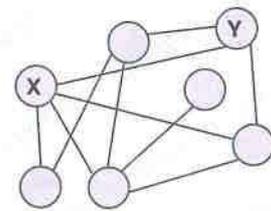
B) D;C

D) R;C

E) O;N

C) B;N

8.



⇒ X = ?, Y = ?

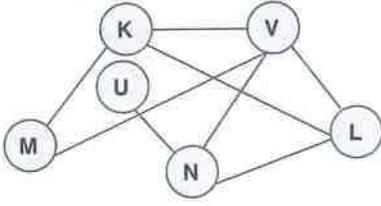
A) 6;3

B) 4;6

D) 1;6

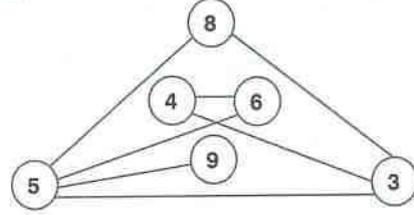
E) 4;8

C) 1;3



Yukarıdaki şekle göre 1. ve 2. soruları cevaplayınız.

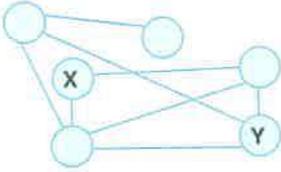
Answer questions 1 and 2 according to the figure above.



Yukarıdaki şekle göre 3. ve 4. soruları cevaplayınız.

Answer questions 3 and 4 according to the figure above.

1.



$\Rightarrow X = ?, Y = ?$

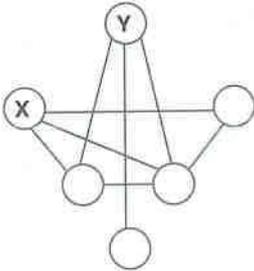
A) N;V

B) K;L

D) M;L

E) K;N

2.



$\Rightarrow X = ?, Y = ?$

A) L;N

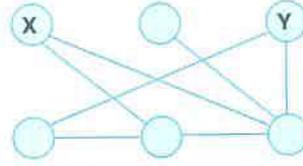
B) K;L

D) V;L

E) L;M

C) M;N

3.



$\Rightarrow X = ?, Y = ?$

A) 8;4

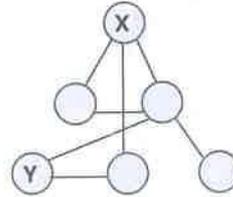
B) 4;6

C) 3;8

D) 4;3

E) 8;6

4.



$\Rightarrow X = ?, Y = ?$

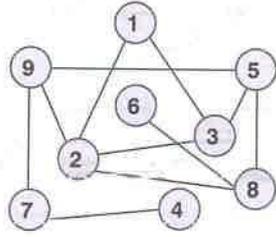
A) 3;4

B) 3;6

C) 4;8

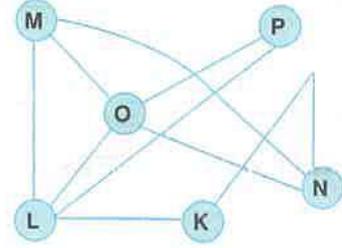
D) 6;8

E) 8;3



Yukarıdaki şekle göre 5. ve 6. soruları cevaplayınız.

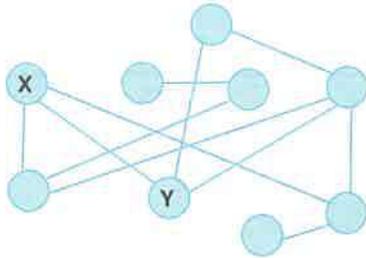
Answer questions 5 and 6 according to the figure above.



Yukarıdaki şekle göre 7. ve 8. soruları cevaplayınız.

Answer questions 7 and 8 according to the figure above.

5.



$\Rightarrow X = ?, Y = ?$

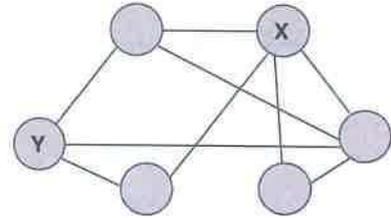
A) 9;5

B) 5;8

D) 3;8

E) 5;3

7.



$\Rightarrow X = ?, Y = ?$

A) L;N

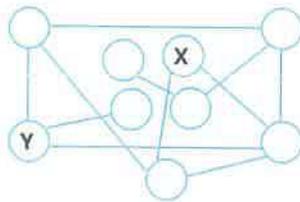
B) O;K

C) L;P

D) O;L

E) M;P

6.



$\Rightarrow X = ?, Y = ?$

A) 7;3

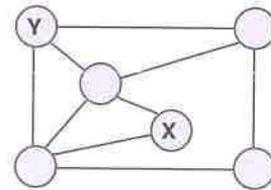
B) 5;1

C) 7;8

D) 1;8

E) 5;8

8.



$\Rightarrow X = ?, Y = ?$

A) K;N

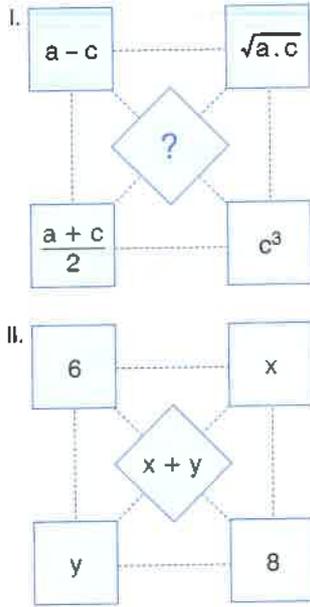
B) N;O

C) P;M

D) P;N

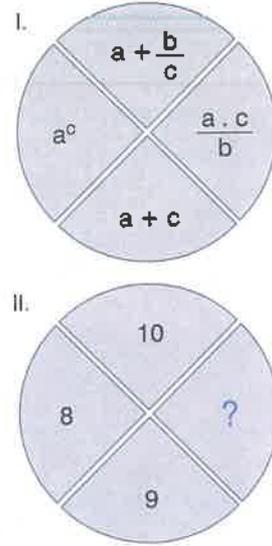
E) K;L

1.



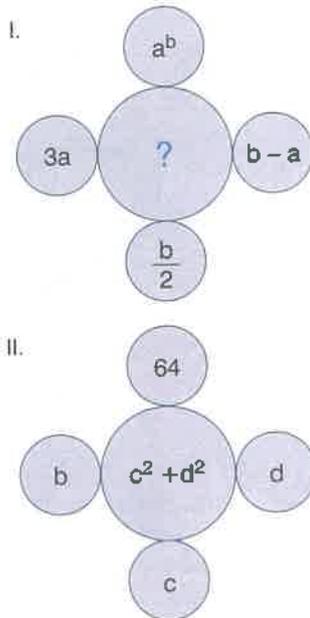
- A) 7 B) 8 C) 9 D) 10

3.



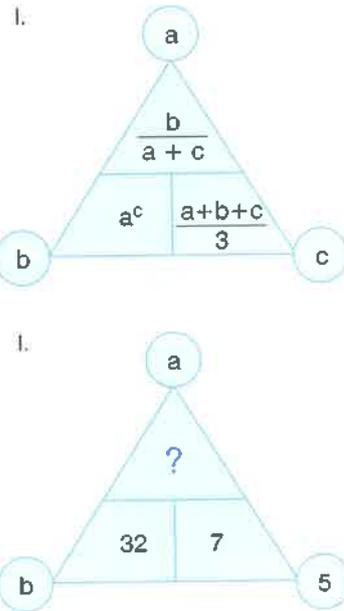
- A) 2 B) 3 C) 4 D) 6 E) 8

2.



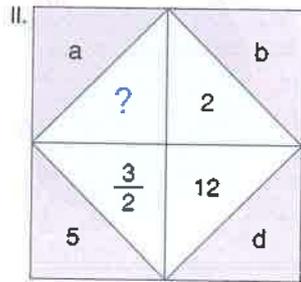
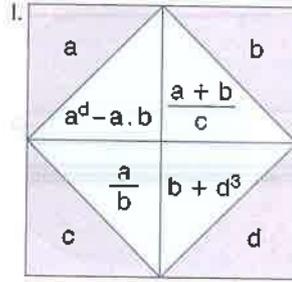
- A) 18 B) 25 C) 32 D) 40 E) 45

4.



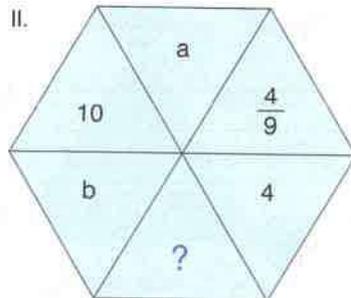
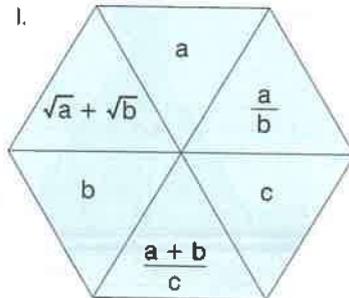
- A) 2 B) 3 C) 4 D) 5 E) 6

5.



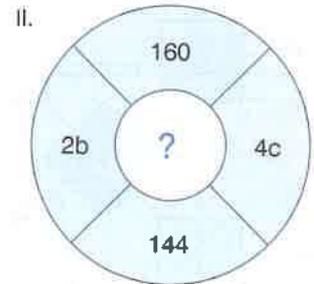
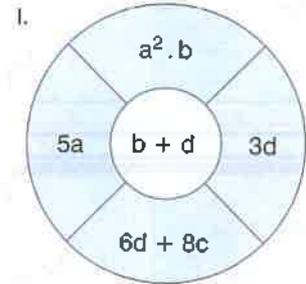
- A) 2 B) 5 C) 7 D) 12 E) 19

6.



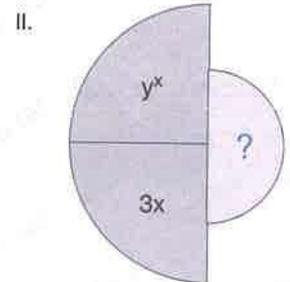
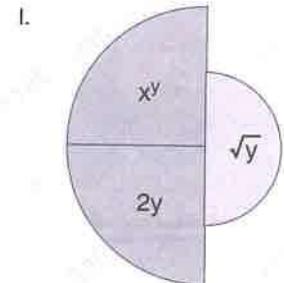
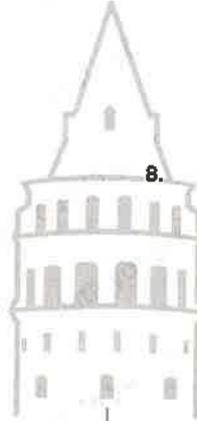
- A) 7 B) 11 C) 13 D) 17 E) 19

7.



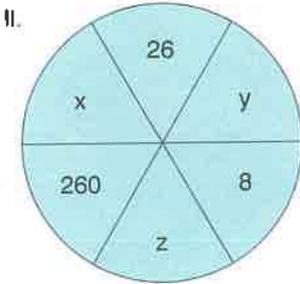
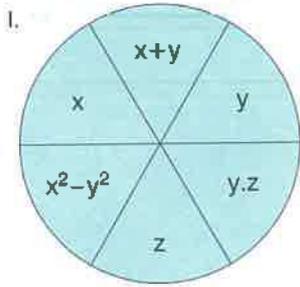
- A) 14 B) 18 C) 22 D) 26 E) 30

8.



- A) $\frac{3}{4}$ B) $\frac{3}{2}$ C) 3 D) $\frac{4}{3}$ E) $\frac{8}{3}$

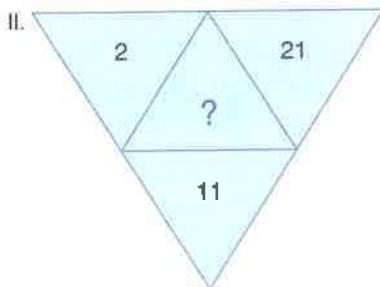
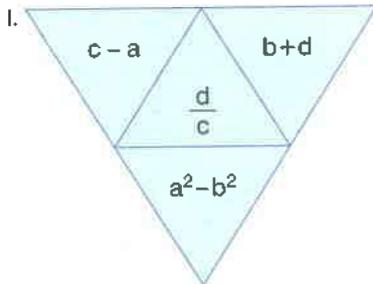
1.



$\Rightarrow \sqrt{x.y.z} = ?$

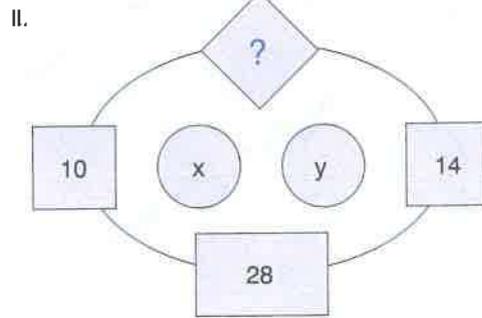
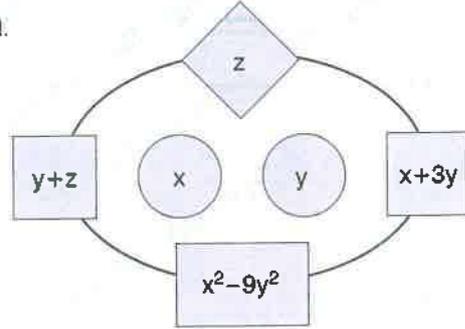
- A) 8 B) 10 C) 12 D) 16 E) 18

2. a, b, c ve d tam sayılardır.
a, b, c and d are integer numbers.



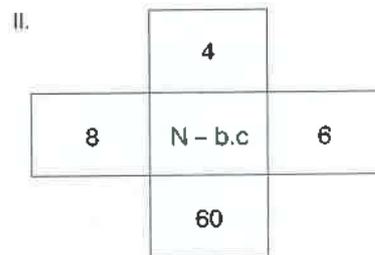
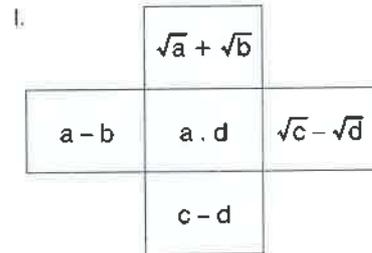
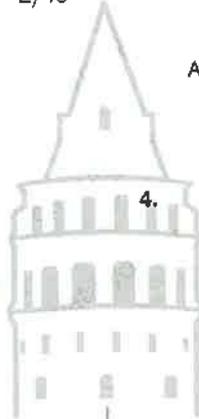
- A) 2 B) $\frac{1}{2}$ C) 1 D) $\frac{1}{3}$ E) 3

3.



- A) 2 B) 4 C) 6 D) 8 E) 9

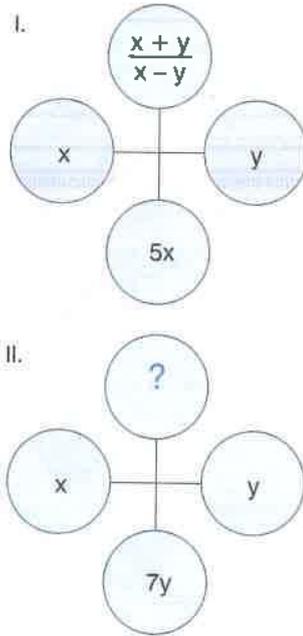
4.



$\Rightarrow N = ?$

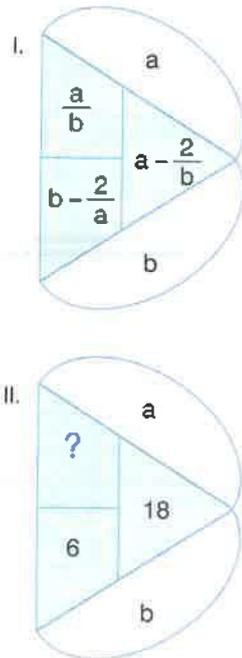
- A) 54 B) 60 C) 72 D) 96 E) 100

5.



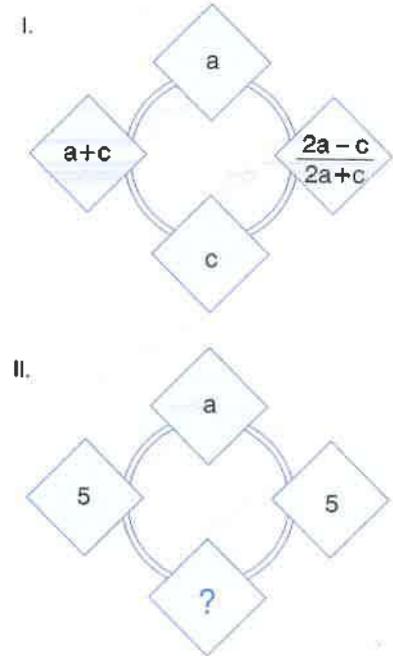
- A) 1 B) $\frac{3}{2}$ C) 4 D) $\frac{5}{2}$ E) 6

6.



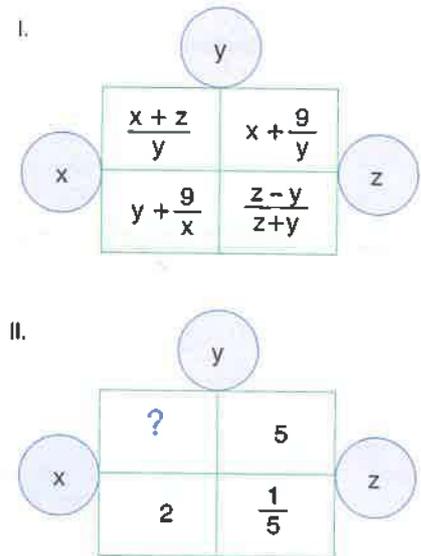
- A) 2 B) $\frac{1}{2}$ C) 3 D) $\frac{1}{3}$ E) 6

7.

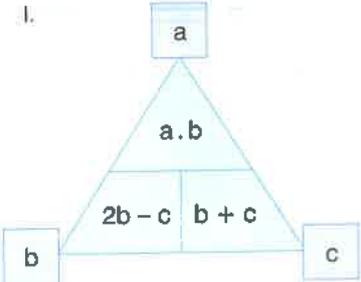
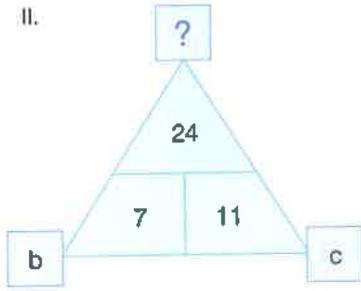


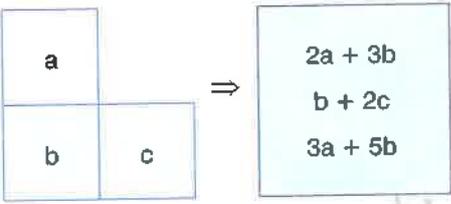
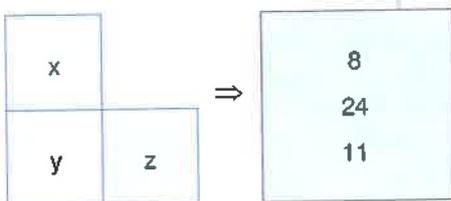
- A) -20 B) -15 C) 10 D) 15 E) 20

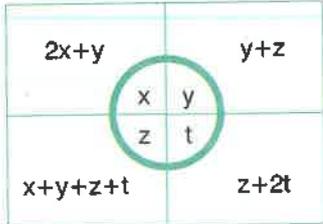
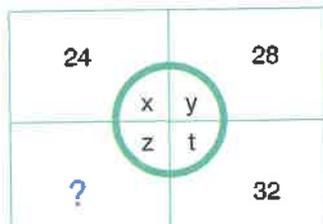
8.

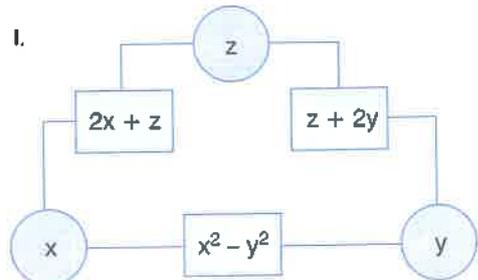
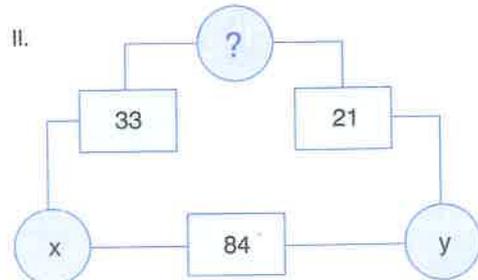


- A) 2 B) $\frac{1}{2}$ C) 3 D) 4 E) $\frac{4}{3}$

1. I. 
- II. 
- A) 2 B) 3 C) 4 D) 5 E) 6

2. I. 
- II. 
- $z = ?$
- A) 7 B) 9 C) 11 D) 13 E) 15

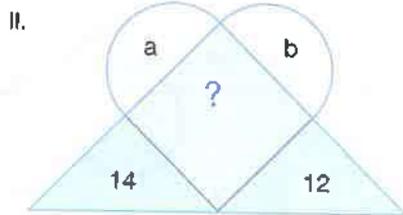
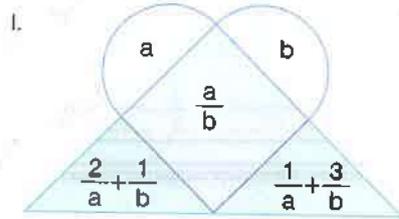
3. I. 
- II. 
- A) 25 B) 27 C) 34 D) 42 E) 46

4. I. 
- II. 
- A) 10 B) 13 C) 16 D) 20 E) 21

TEST 3

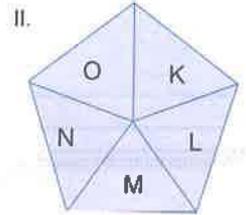
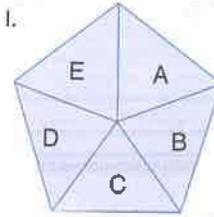
Denklem Eşleştirme / Equation Matching

5.



- A) $\frac{1}{3}$ B) 2 C) $\frac{1}{2}$ D) 1 E) 3

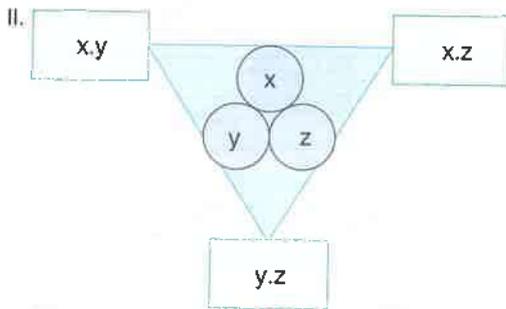
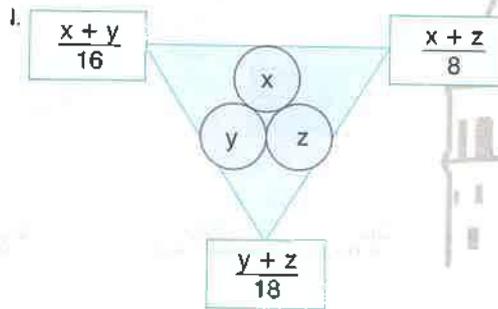
7.



$N = 18 \Rightarrow M = ?$

- A) 14 B) 16 C) 22 D) 24 E) 30

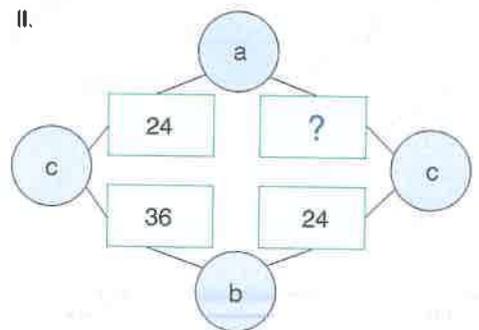
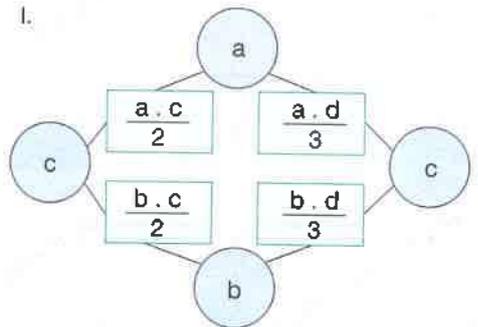
6.



$\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = ?$

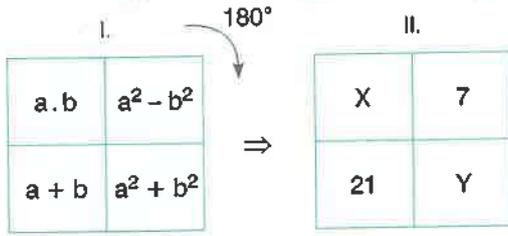
- A) 12 B) 15 C) 18 D) 21 E) 24

8.



- A) 12 B) 16 C) 18 D) 30 E) 32

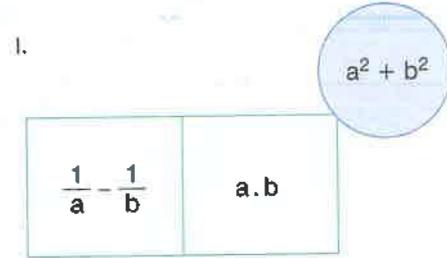
1.



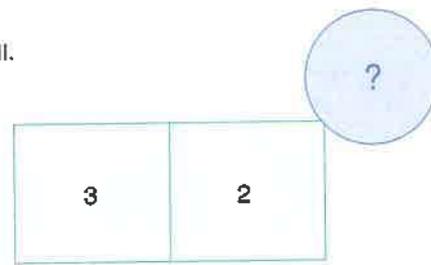
$X + Y = ?$

- A) 32 B) 34 C) 36 D) 39 E) 40

3.

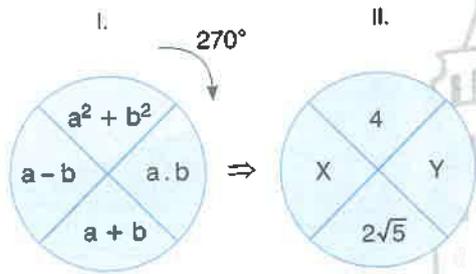


II.



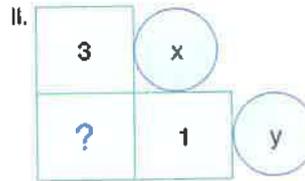
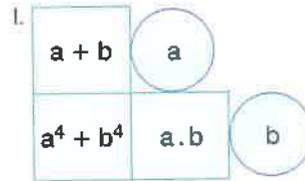
- A) 32 B) 34 C) 36 D) 38 E) 40

2.



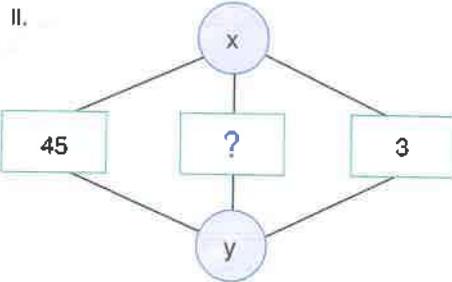
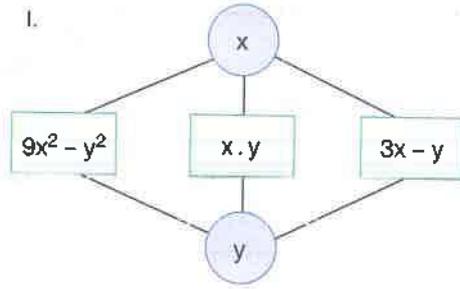
$X + Y = ?$

- A) 30 B) 32 C) 34 D) 36 E) 38



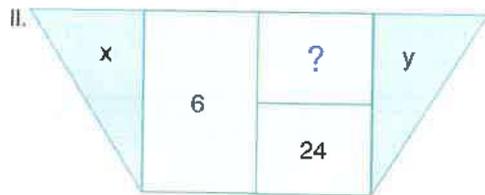
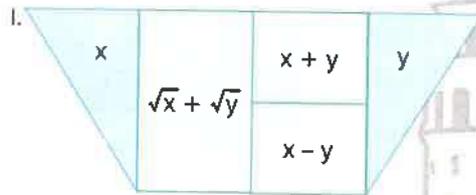
- A) 28 B) 33 C) 39 D) 47 E) 51

5.



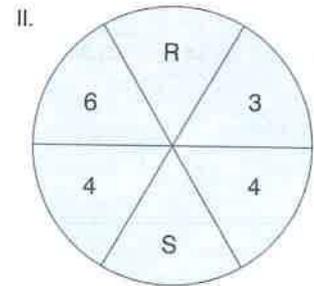
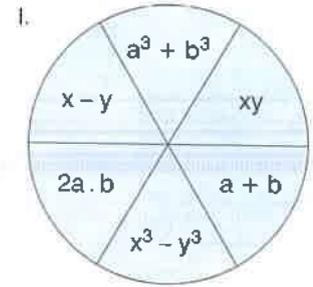
- A) 12 B) 15 C) 18 D) 24 E) 32

6.



- A) 25 B) 26 C) 27 D) 28 E) 29

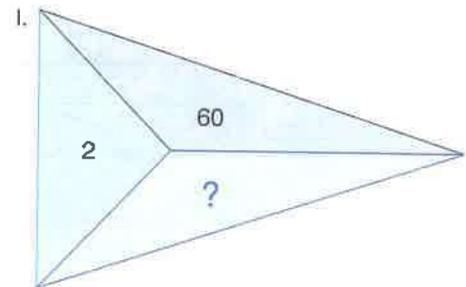
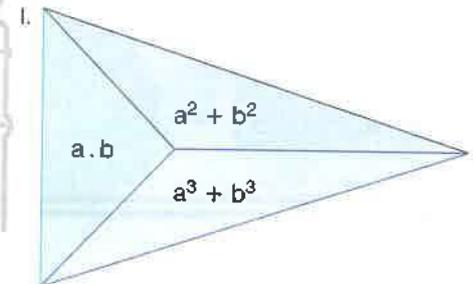
7.



$S - R = ?$

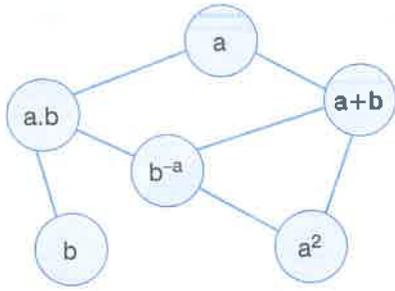
- A) 210 B) 220 C) 230 D) 240 E) 250

8.

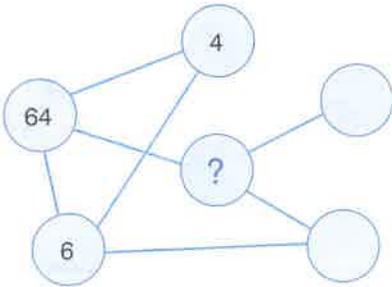


- A) 440 B) 456 C) 461 D) 472 E) 480

1. I.



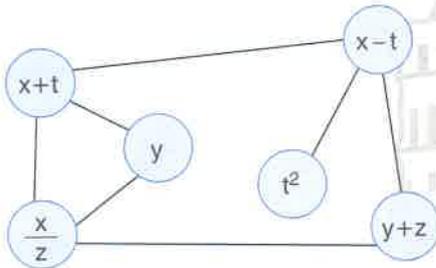
II.



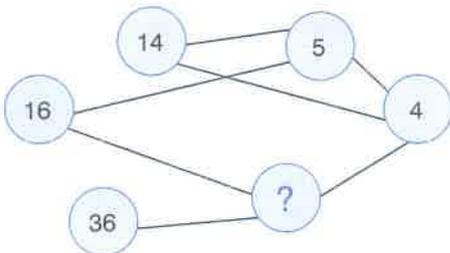
- A) 12 B) -16 C) -12 D) 18 E) -24

2.

I.



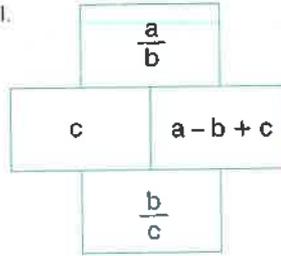
II.



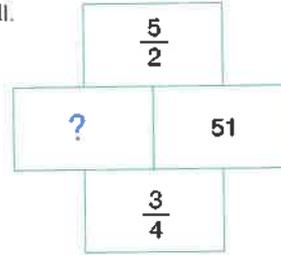
- A) 12 B) 14 C) 16 D) 18 E) 22

3.

I.



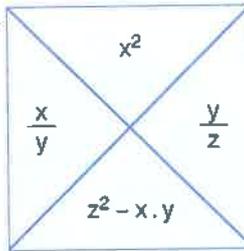
II.



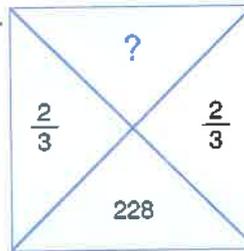
- A) 16 B) 24 C) 32 D) 48 E) 54

4.

I.

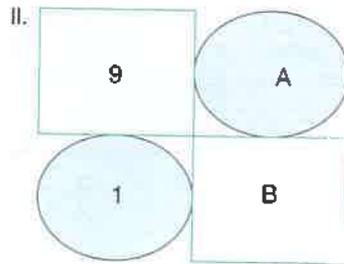
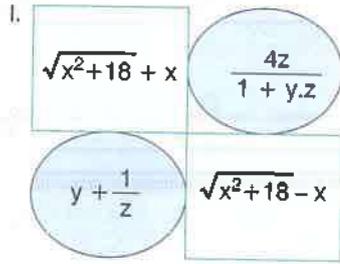


II.



- A) 64 B) 121 C) 144 D) 196 E) 324

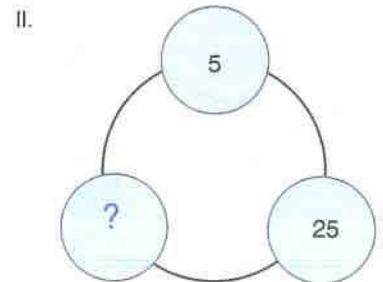
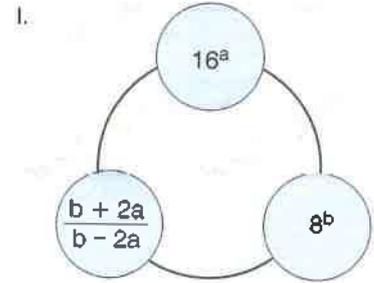
5.



A + B = ?

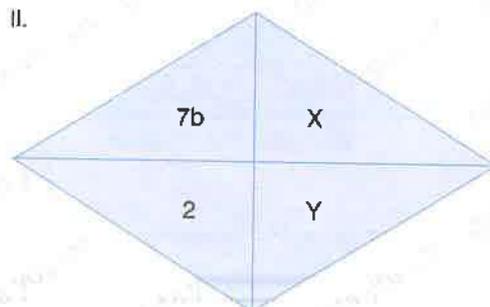
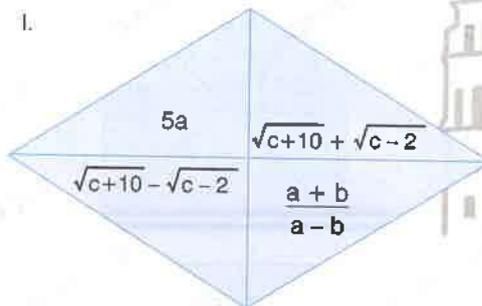
- A) 4 B) 5 C) 6 D) 10 E) 12

7.



- A) 1 B) 3 C) 5 D) 7 E) 9

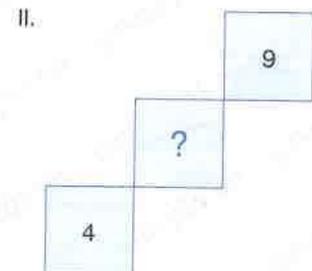
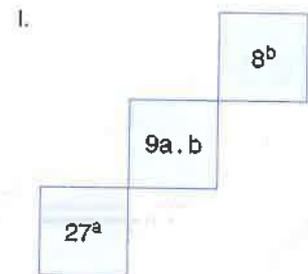
6.



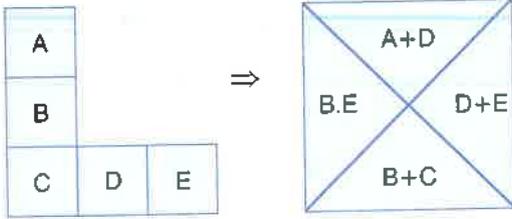
X + Y = ?

- A) 6 B) 8 C) 9 D) 10 E) 12

8.

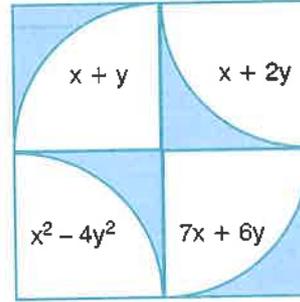


- A) 4 B) 6 C) 8 D) 9 E) 12



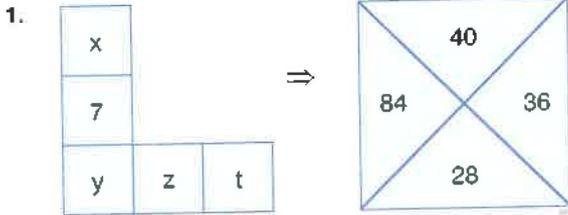
Yukarıdaki şekle göre 1. ve 2. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 1 and 2 independently according to the figure above.



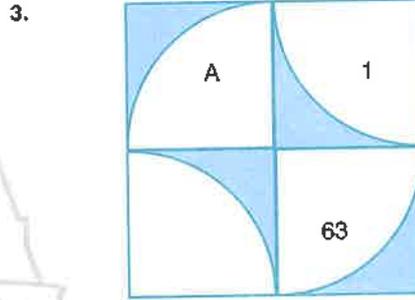
Yukarıdaki şekle göre 3. ve 4. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 3 and 4 independently according to the figure above.



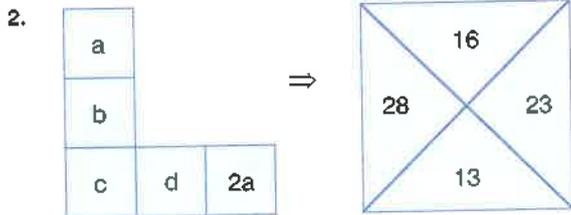
$x = ?$

- A) 7 B) 8 C) 10 D) 14 E) 16



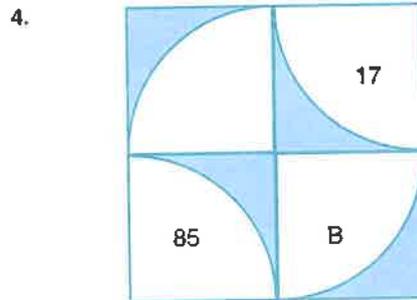
$A = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9



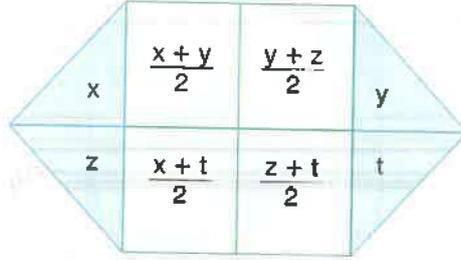
$a + b + c - d = ?$

- A) 9 B) 11 C) 14 D) 15 E) 18



$B = ?$

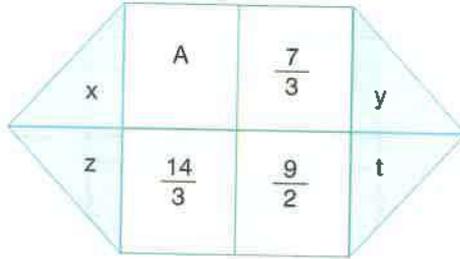
- A) 75 B) 88 C) 95 D) 105 E) 114



Yukarıdaki şekle göre 5. ve 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 5 and 6 independently according to the figure above.

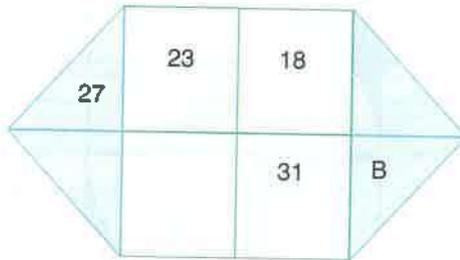
5.



$\Rightarrow A = ?$

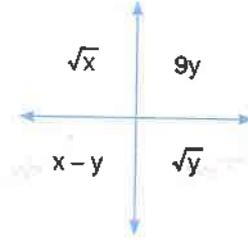
- A) $\frac{3}{2}$ B) 2 C) $\frac{5}{2}$ D) $\frac{7}{2}$

6.



$\Rightarrow B = ?$

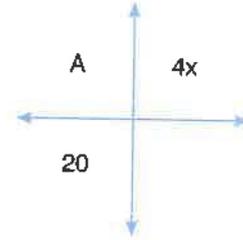
- A) 17 B) 18 C) 26 D) 37 E) 45



Yukarıdaki şekle göre 7. ve 8. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 7 and 8 independently according to the figure above.

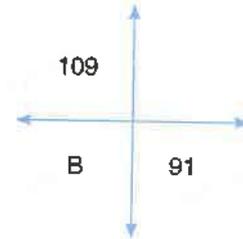
7.



$\Rightarrow A = ?$

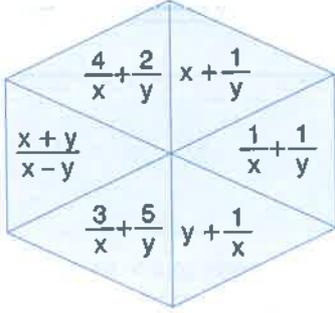
- E) 4 A) 5 B) 6 C) 7 D) 8 E) 9

8.



$\Rightarrow B = ?$

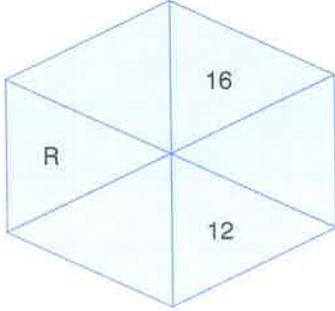
- A) 1800 B) 2400 C) 3600 D) 5400 E) 7200



Yukarıdaki şekle göre 1. ve 2. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 1 and 2 independently according to the figure above.

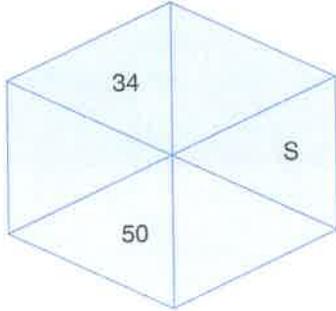
1.



$\Rightarrow R = ?$

- A) 3 B) 4 C) 5 D) 6

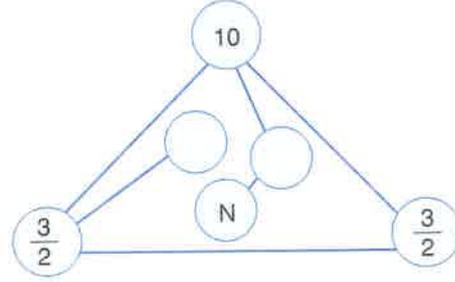
2.



$\Rightarrow S = ?$

- A) 6 B) 9 C) 12 D) 18 E) 36

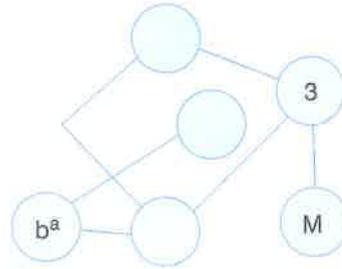
3.



$\Rightarrow N = ?$

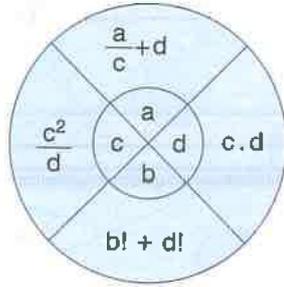
- A) 16 B) 18 C) 24 D) 26 E) 32

4.



$\Rightarrow M = ?$

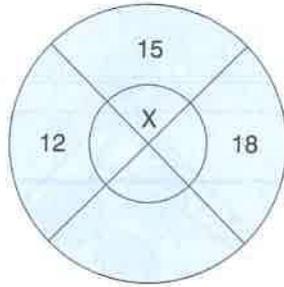
- A) 3 B) 4 C) 6 D) 105 E) 16



Yukarıdaki şekle göre 5. ve 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 5 and 6 independently according to the figure above.

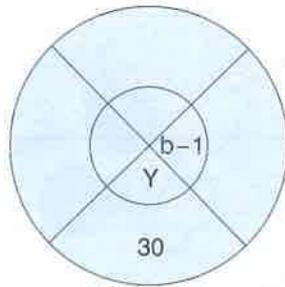
5.



$\Rightarrow X = ?$

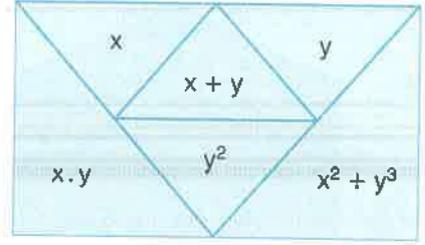
- A) 16 B) 18 C) 32 D) 64

6.



$\Rightarrow Y = ?$

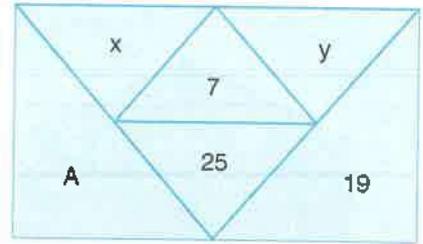
- A) 3 B) 4 C) 6 D) 8 E) 9



Yukarıdaki şekle göre 7. ve 8. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 7 and 8 independently according to the figure above.

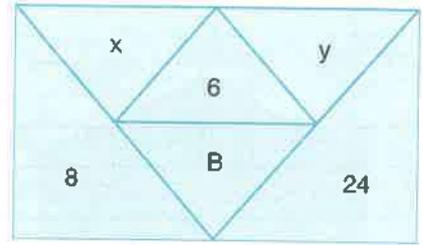
7.



$\Rightarrow A + 6x = ?$

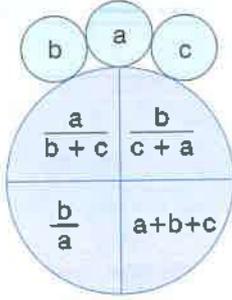
- A) 12 B) 16 C) 18 D) 24 E) 26

8.



$\Rightarrow B + y^x = ?$

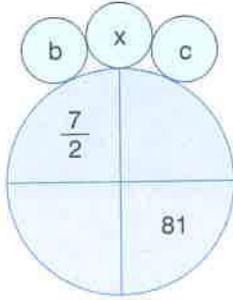
- A) 12 B) 16 C) 20 D) 24 E) 28



Yukarıdaki şekle göre 1. ve 2. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 1 and 2 independently according to the figure above.

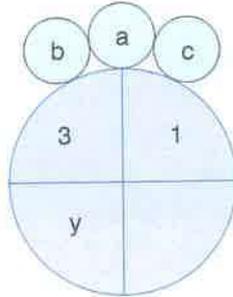
1.



$\Rightarrow x = ?$

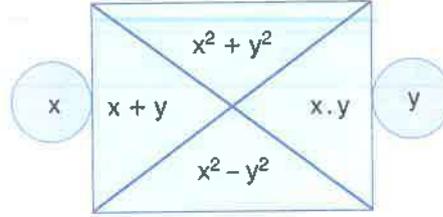
A) 14 B) 21 C) 28 D) 49

2.



$\Rightarrow y = ?$

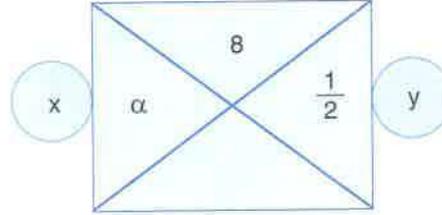
A) 1 B) $\frac{1}{3}$ C) 2 D) $\frac{2}{3}$ E) 3



Yukarıdaki şekle göre 3. ve 4. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 3 and 4 independently according to the figure above.

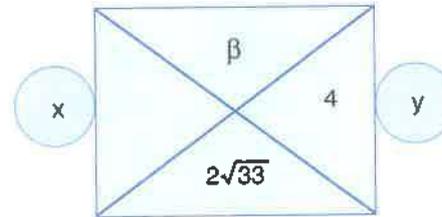
3.



$\Rightarrow \alpha = ?$

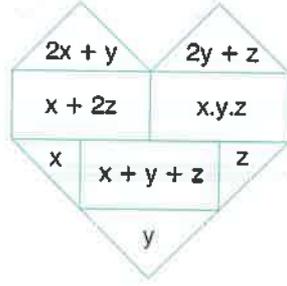
A) -1 B) 2 C) -3 D) 4 E) -5

4.



$\Rightarrow \beta = ?$

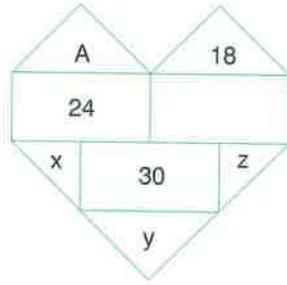
A) 8 B) 11 C) 12 D) 13 E) 14



Yukarıdaki şekle göre 5. ve 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 5 and 6 independently according to the figure above.

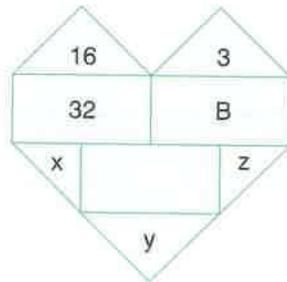
5.



⇒ A = ?

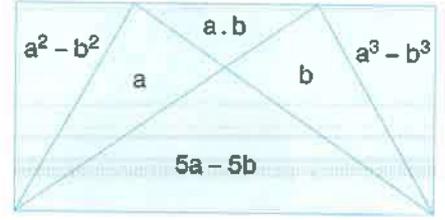
- A) 23 B) 27 C) 32 D) 36

6.



⇒ B = ?

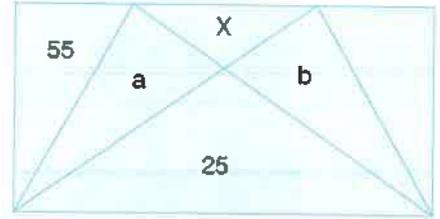
- A) -416 B) 420 C) -440 D) 450 E) -480



Yukarıdaki şekle göre 7. ve 8. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 7 and 8 independently according to the figure above.

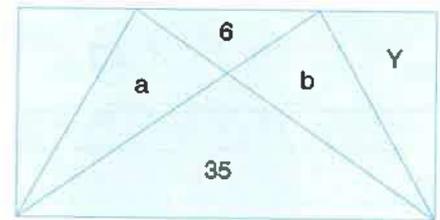
7.



⇒ X = ?

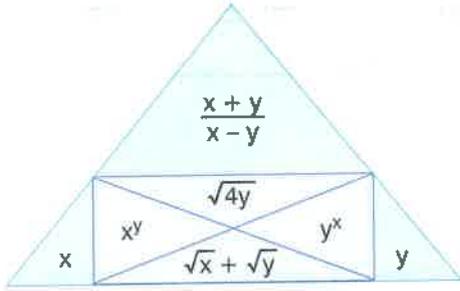
- A) 16 B) 18 C) 20 D) 24 E) 30

8.



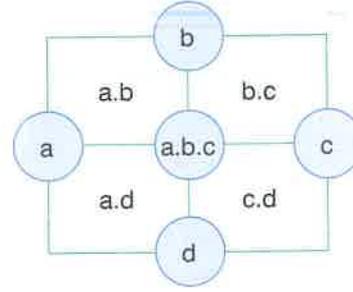
⇒ Y = ?

- A) 385 B) 469 C) 490 D) 567 E) 581



Yukarıdaki şekle göre 1. ve 2. soruları birbirinden bağımsız olarak cevaplayınız.

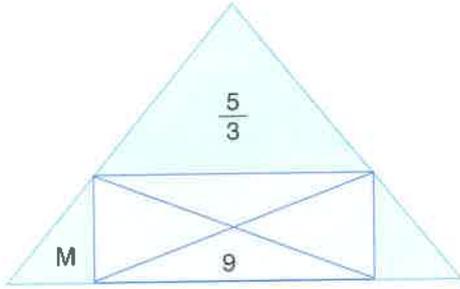
Answer questions 1 and 2 independently according to the figure above.



Yukarıdaki şekle göre 3. ve 4. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 3 and 4 independently according to the figure above.

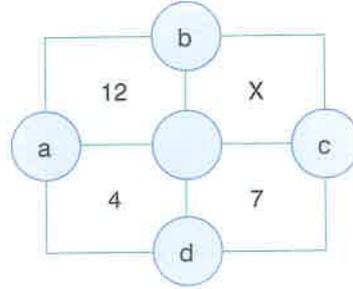
1.



$\Rightarrow M = ?$

- A) 9 B) 16 C) 25 D) 36

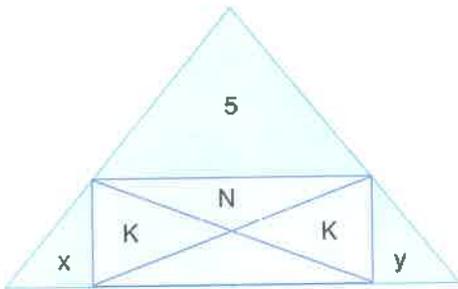
3.



$\Rightarrow X = ?$

- A) 3 B) 6 C) 9 D) 14 E) 21

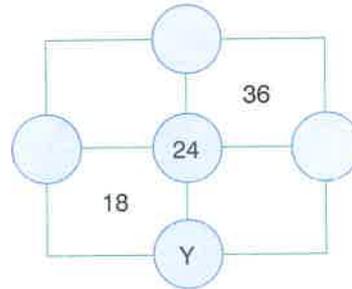
2.



$\Rightarrow N = ?$

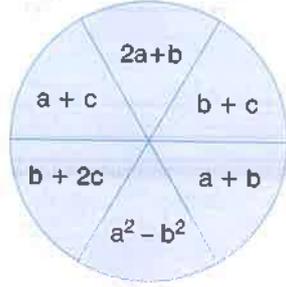
- A) 2 B) 3 C) $\frac{2}{3}$ D) $\frac{3}{2}$ E) 4

4.



$\Rightarrow Y = ?$

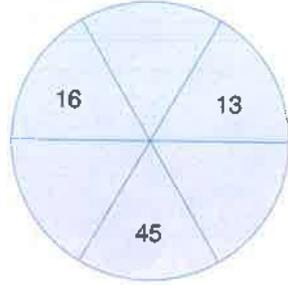
- A) 3 B) 6 C) 9 D) 27 E) 36



Yukardaki şekle göre 5. ve 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 5 and 6 independently according to the figure above.

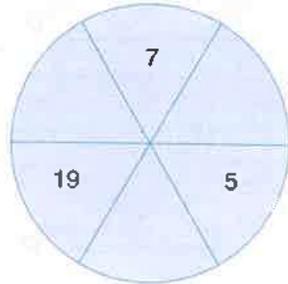
5.



$\Rightarrow c = ?$

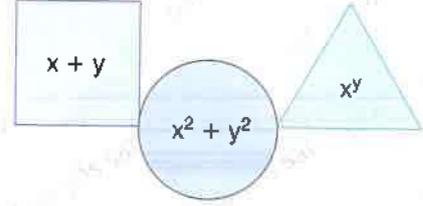
- A) 5 B) 6 C) 7 D) 8

6.



$\Rightarrow a = ?$

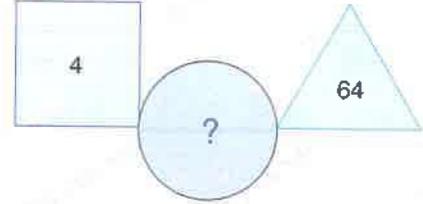
- A) 2 B) 3 C) 4 D) 5 E) 6



Yukardaki şekle göre 7. ve 8. soruları birbirinden bağımsız olarak cevaplayınız.

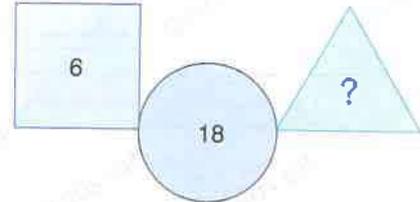
Answer questions 7 and 8 independently according to the figure above.

7.

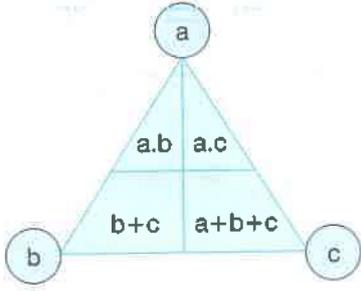


- A) 16 B) 18 C) 24 D) 32 E) 40

8.



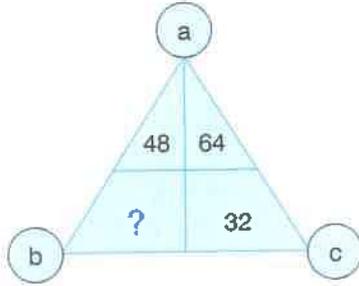
- A) 16 B) 25 C) 27 D) 32 E) 36



Yukarıdaki şekle göre 1. ve 2. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions 1 and 2 independently according to the figure above.

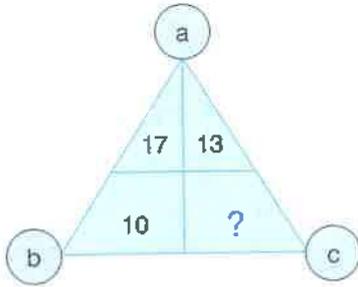
1.



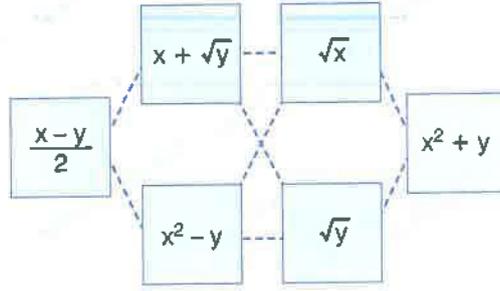
A) 16 B) 18 C) 24 D) 28

E) 30

2.



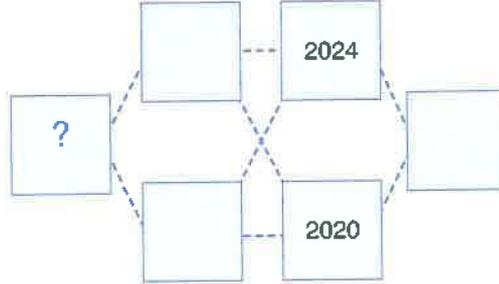
A) 11 B) 13 C) 15 D) 17 E) 19



Yukarıdaki şekle göre 3. ve 4. soruları birbirinden bağımsız olarak cevaplayınız.

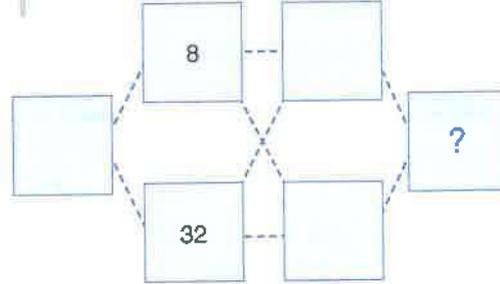
Answer questions 3 and 4 independently according to the figure above.

3.

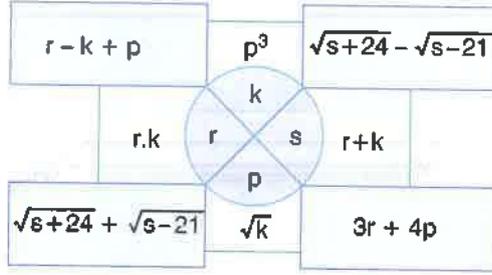


A) 2022 B) 4048 C) 6064 D) 8080 E) 8088

4.

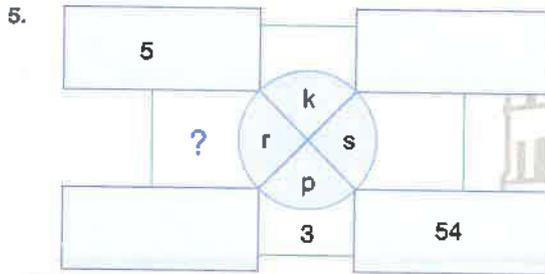


A) 24 B) 32 C) 40 D) 48 E) 54

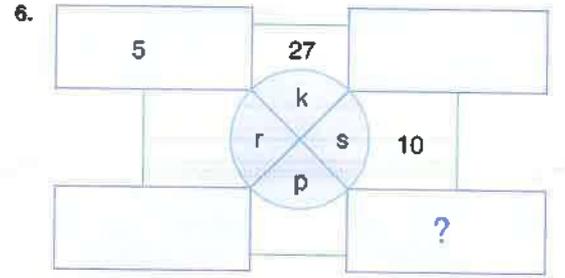


Yukarıdaki şekle göre 5. – 8. soruları birbirinden bağımsız olarak cevaplayınız.

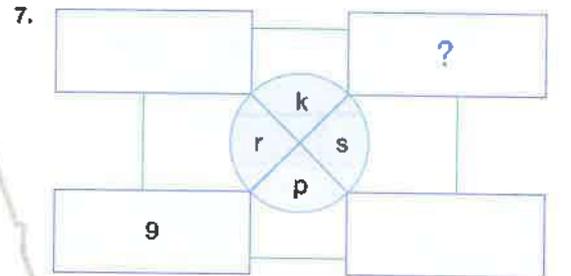
Answer questions from 5 to 8 independently according to the figure above.



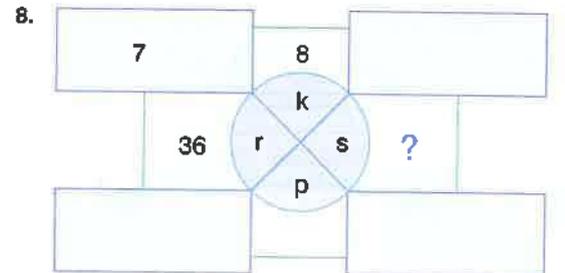
- A) 12 B) 18 C) 24 D) 28 E) 32



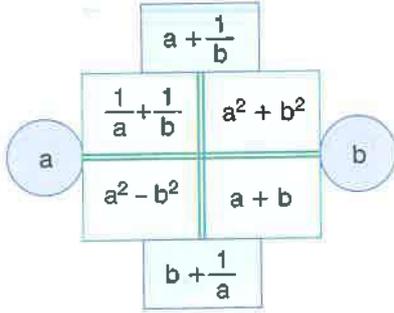
- A) 24 B) 26 C) 28 D) 30 E) 32



- A) 3 B) 4 C) 5 D) 6 E) 7



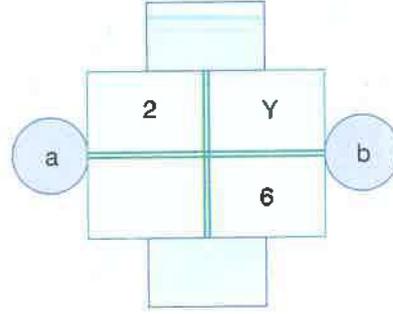
- A) 5 B) 9 C) 13 D) 15 E) 20



Yukarıdaki şekle göre 1. – 3. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 1 to 3 independently according to the figure above.

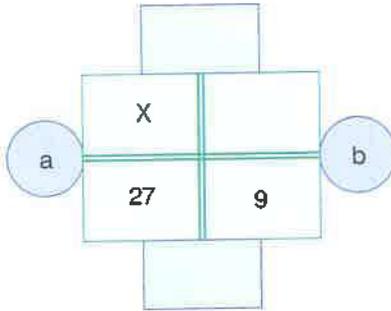
2.



$\Rightarrow Y = ?$

- A) 24 B) 27 C) 30 D) 36 E) 42

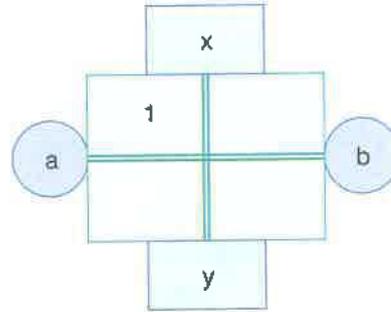
1.



$\Rightarrow X = ?$

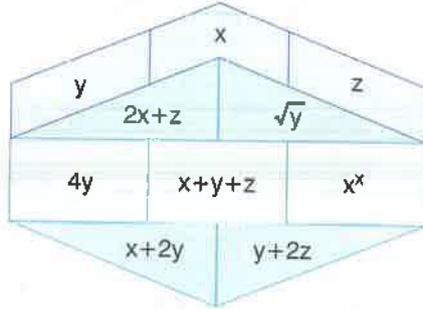
- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) 1 D) $\frac{3}{2}$ E) 2

3.



$a, b \in \mathbb{Z} \Rightarrow x + y = ?$

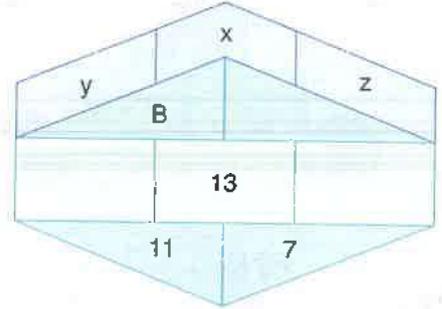
- A) 1 B) 2 C) 3 D) 4 E) 5



Yukarıdaki şekle göre 4. – 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 4 to 6 independently according to the figure above.

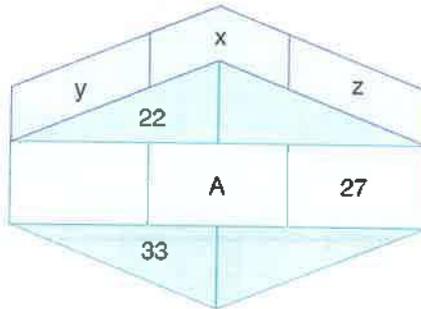
5.



$\Rightarrow B = ?$

- A) 15 B) 17 C) 19 D) 21 E) 23

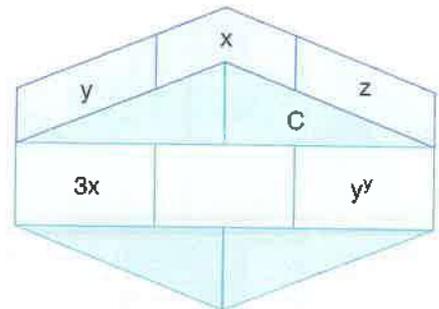
4.



$\Rightarrow A = ?$

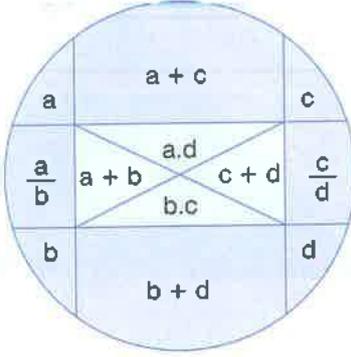
- A) 34 B) 36 C) 38 D) 40 E) 42

6.



$C = ?$

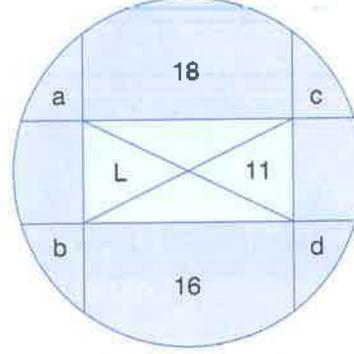
- A) $\frac{3}{2}$ B) $\frac{3}{4}$ C) $\frac{9}{4}$ D) $\frac{9}{16}$ E) $\frac{9}{2}$



Yukarıdaki şekle göre 1. - 3. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 1 to 3 independently according to the figure above.

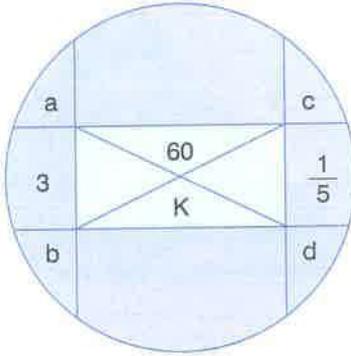
2.



$\Rightarrow L = ?$

- A) 14 B) 17 C) 19 D) 20 E) 23

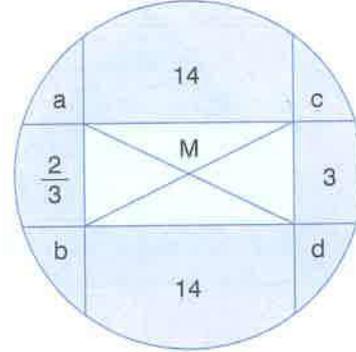
1.



$\Rightarrow K = ?$

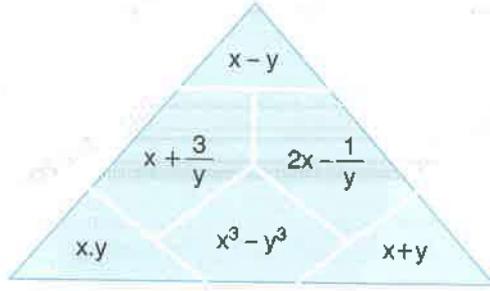
- A) 3 B) 4 C) 5 D) 6 E) 8

3.



$M = ?$

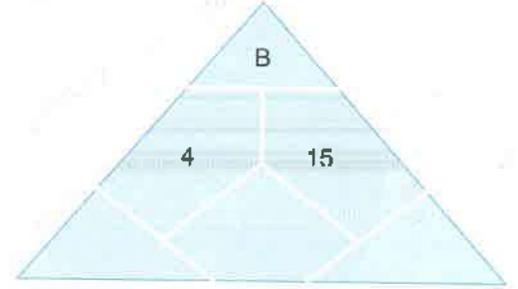
- A) 8 B) 12 C) 16 D) 24 E) 32



Yukarıdaki şekle göre 4. - 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 4 to 6 independently according to the figure above.

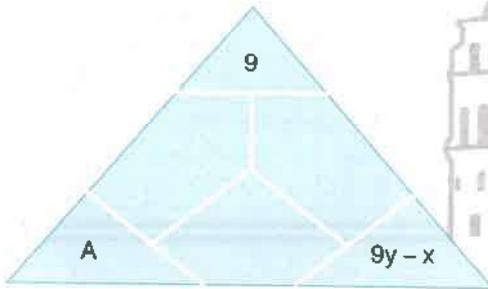
5.



$\Rightarrow B = ?$

- A) 9 B) 8 C) 7 D) 6 E) 5

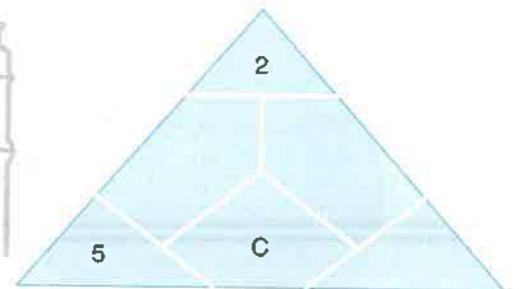
4.



$\Rightarrow A = ?$

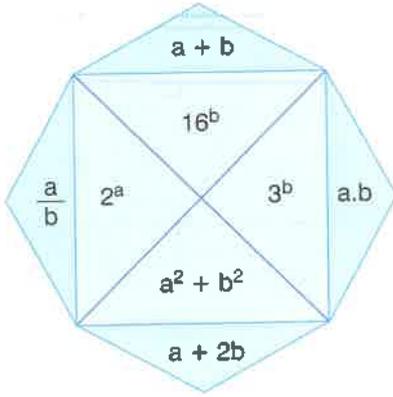
- A) 24 B) 28 C) 36 D) 42 E) 64

6.



$C = ?$

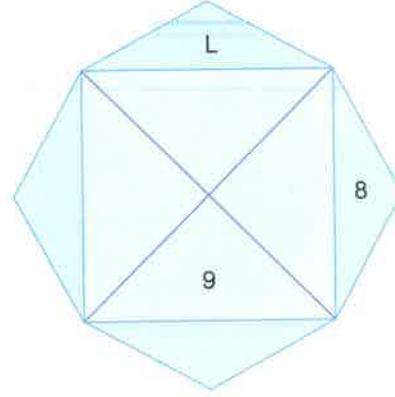
- A) 19 B) 26 C) 34 D) 38 E) 42



Yukarıdaki şekilde göre 1. - 3. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 1 to 3 independently according to the figure above.

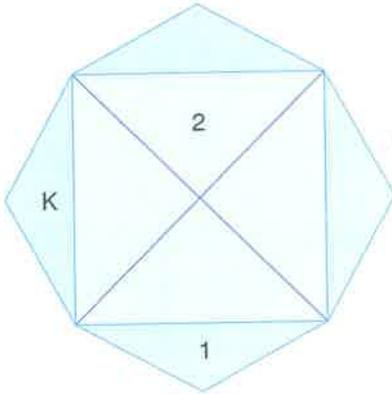
2.



$\Rightarrow L = ?$

- A) 6 B) -5 C) 4 D) -3 E) 2

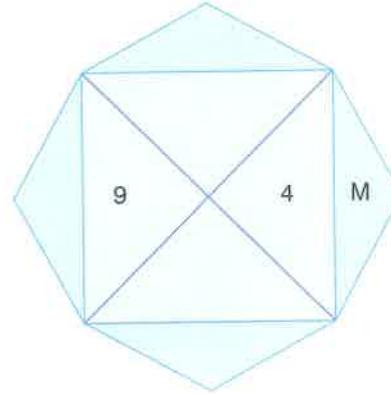
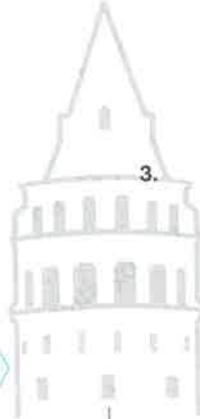
1.



$\Rightarrow K = ?$

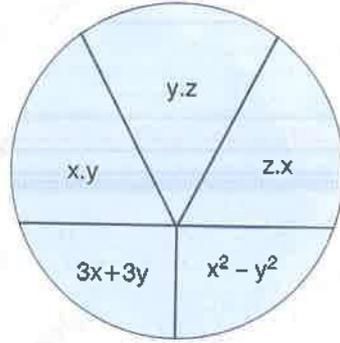
- A) $\frac{1}{2}$ B) 3 C) 2 D) $\frac{1}{3}$ E) 1

3.



$M = ?$

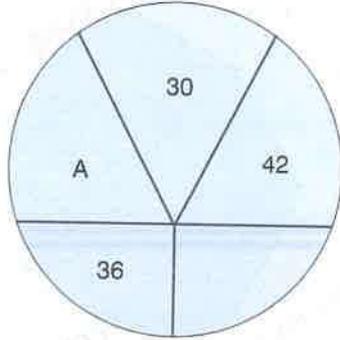
- A) 12 B) 9 C) 8 D) 6 E) 4



Yukandaki şekle göre 4. - 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 4 to 6 independently according to the figure above.

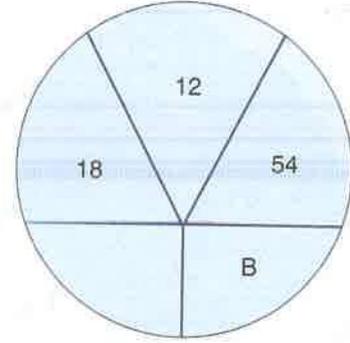
4.



$\Rightarrow A = ?$

- A) 21 B) 27 C) 32 D) 35 E) 49

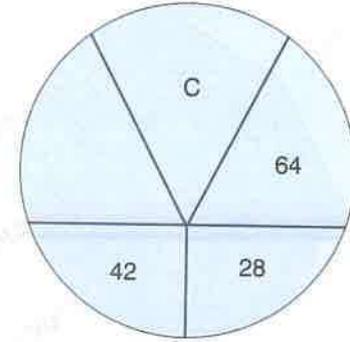
5.



$\Rightarrow B = ?$

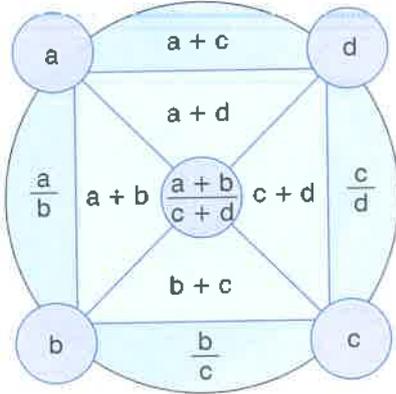
- A) 55 B) 60 C) 65 D) 72 E) 77

6.



$C = ?$

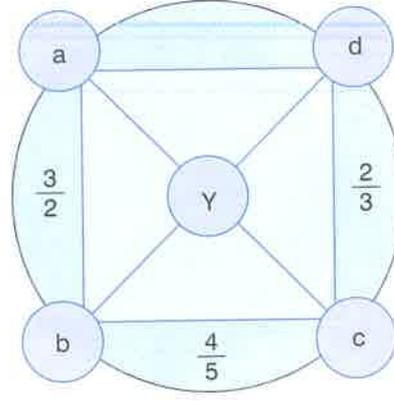
- A) 32 B) 36 C) 42 D) 48 E) 54



Yukarıdaki şekle göre 1. – 3. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 1 to 3 independently according to the figure above.

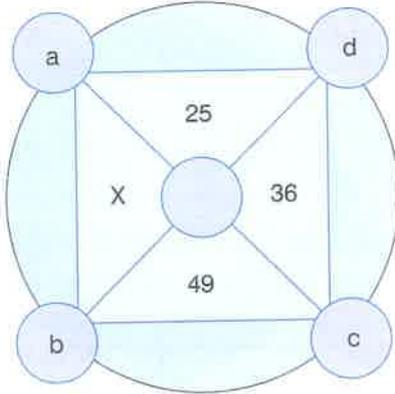
2.



$\Rightarrow Y = ?$

- A) $\frac{2}{3}$ B) $\frac{4}{5}$ C) $\frac{1}{2}$ D) $\frac{3}{4}$ E) $\frac{3}{5}$

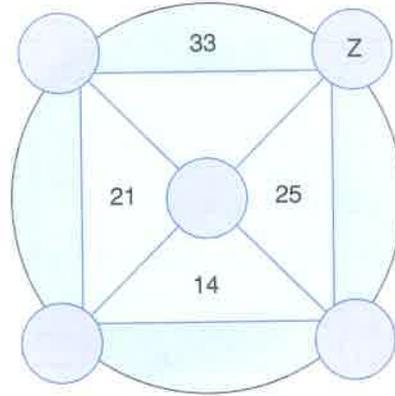
1.



$\Rightarrow X = ?$

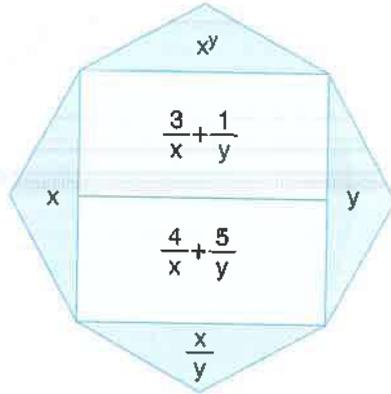
- A) 16 B) 27 C) 38 D) 45 E) 64

3.



$Z = ?$

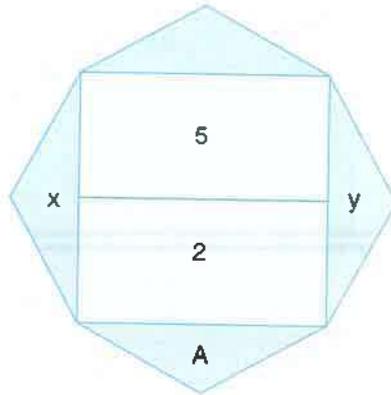
- A) 5 B) 7 C) 12 D) 13 E) 20



Yukandaki şekle göre 4. - 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 4 to 6 independently according to the figure above.

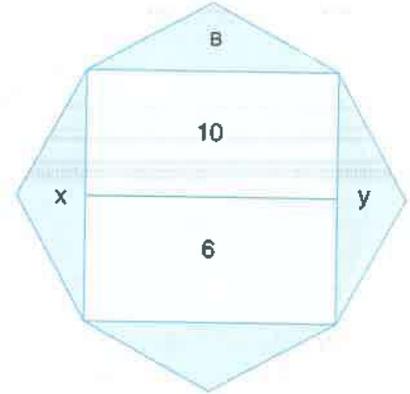
4.



$\Rightarrow A = ?$

- A) $-\frac{7}{19}$ B) $\frac{2}{5}$ C) $\frac{21}{29}$ D) $-\frac{14}{23}$ E) $\frac{4}{7}$

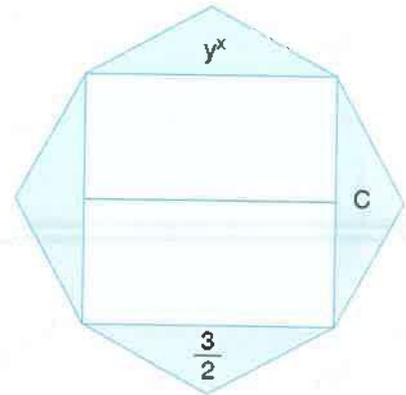
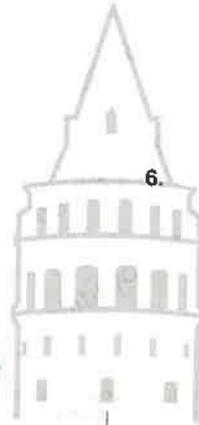
5.



$\Rightarrow B = ?$

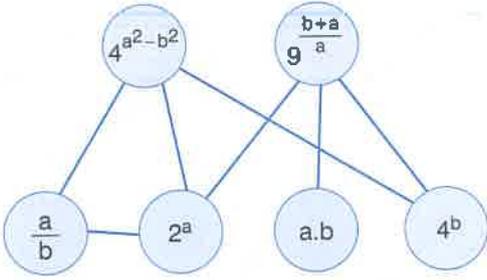
- A) 4 B) $\frac{1}{2}$ C) $\frac{1}{4}$ D) $\frac{1}{9}$ E) 2

6.



$C = ?$

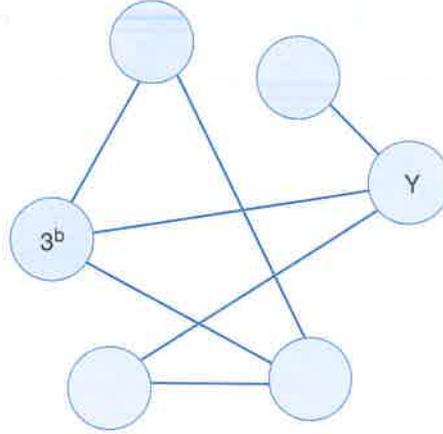
- A) $\frac{3}{4}$ B) $\frac{9}{4}$ C) $\frac{9}{8}$ D) $\frac{27}{8}$ E) $\frac{3}{2}$



Yukarıdaki şekle göre 1. – 3. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 1 to 3 independently according to the figure above.

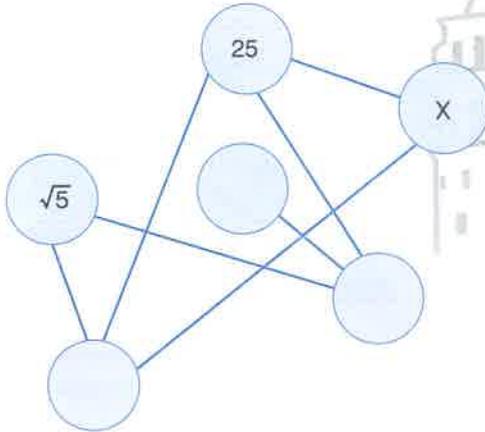
2.



$\Rightarrow Y = ?$

- A) 40 B) 36 C) 32 D) 28 E) 24

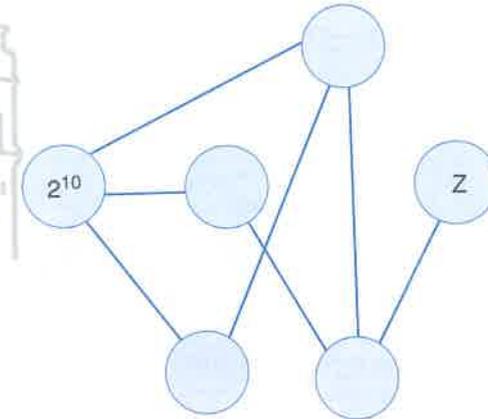
1.



3.

$\Rightarrow X = ?$

- A) 2 B) 4 C) 6 D) 8 E) 9

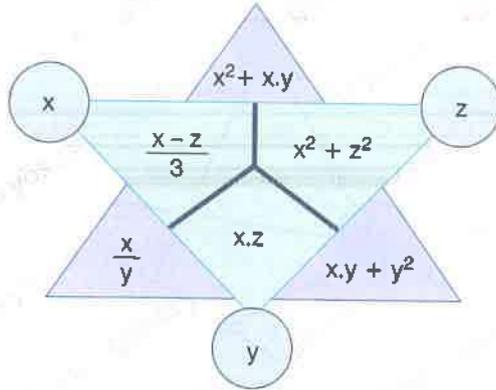


a, b tam sayılardır.

a, b are integer numbers.

$Z = ?$

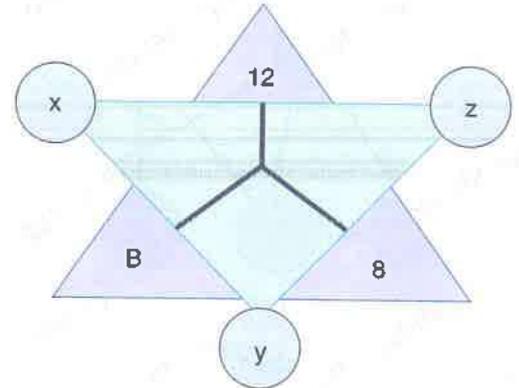
- A) 6 B) 8 C) 12 D) 15 E) 16



Yukarıdaki şekle göre 4. - 6. soruları birbirinden bağımsız olarak cevaplayınız.

Answer questions from 4 to 6 independently according to the figure above.

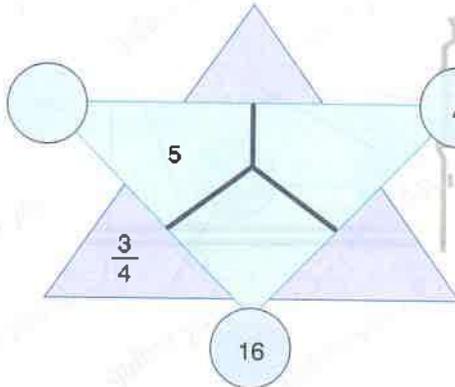
5.



$\Rightarrow B = ?$

- A) 1 B) $\frac{1}{4}$ C) 2 D) $\frac{3}{2}$ E) 3

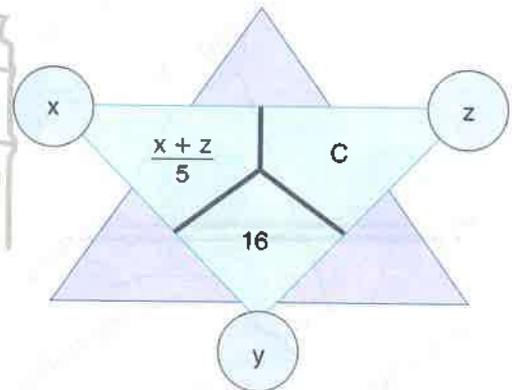
4.



$\Rightarrow A = ?$

- A) -6 B) -3 C) 6 D) 8 E) 9

6.



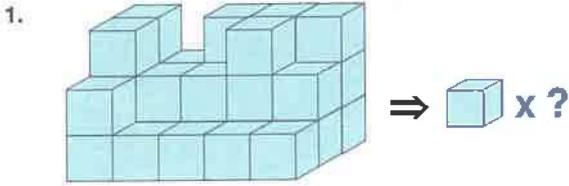
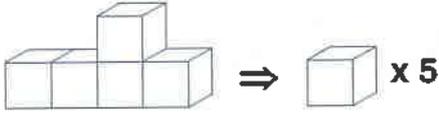
$C = ?$

- A) 32 B) 52 C) 68 D) 146 E) 257

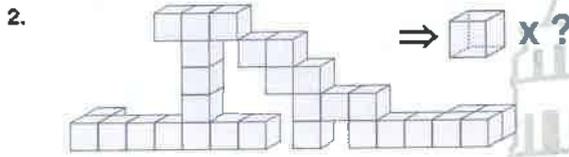
Aşağıda verilen örneğe göre 1 – 6 soruları cevaplayınız.

Answer the questions 1 – 6 according to the example given below.

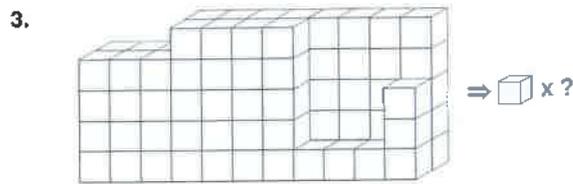
Örnek (Example)



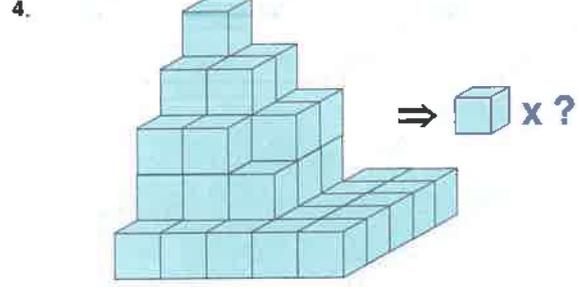
- A) 25 B) 27 C) 29 D) 30 E) 32



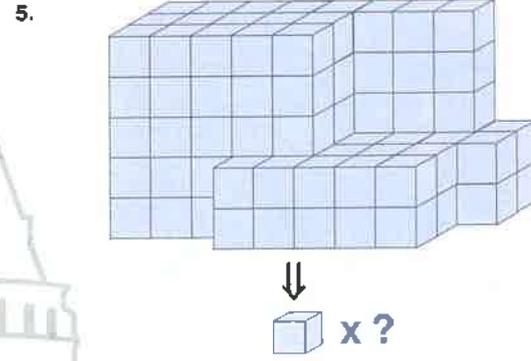
- A) 35 B) 31 C) 29 D) 27 E) 24



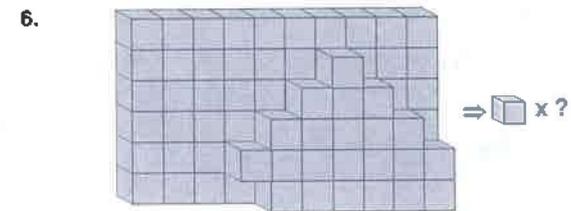
- A) 87 B) 90 C) 92 D) 93 E) 95



- A) 40 B) 42 C) 43 D) 44 E) 46



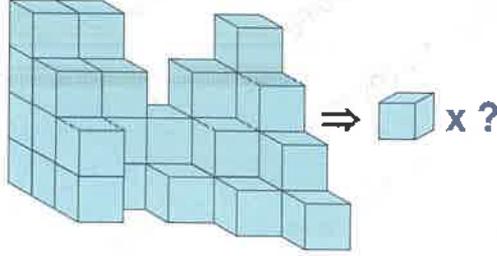
- A) 116 B) 114 C) 113 D) 110 E) 109



- A) 78 B) 80 C) 82 D) 84 E) 86

7. Aşağıdaki şekilde kaç küp vardır?

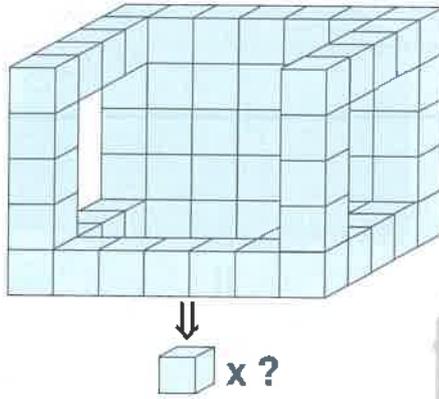
How many cubes are there in the figure given below?



- A) 32 B) 33 C) 34 D) 35 E) 36

8. Aşağıdaki şekilde kaç küp vardır?

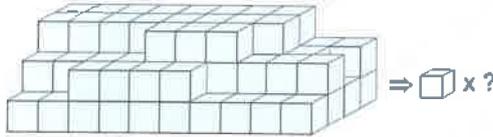
How many cubes are there in the figure given below?



- A) 65 B) 67 C) 69 D) 70 E) 72

9. Aşağıdaki şekilde kaç küp vardır?

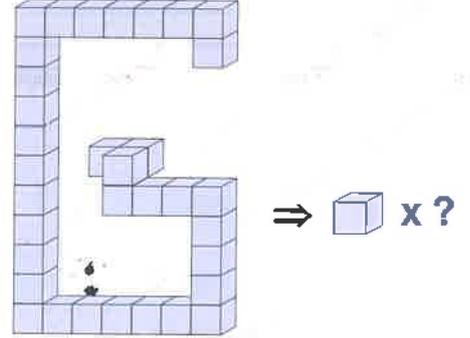
How many cubes are there in the figure given below?



- A) 64 B) 65 C) 67 D) 90 E) 92

10. Aşağıdaki şekilde kaç küp vardır?

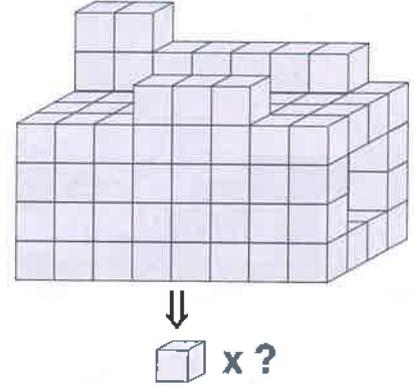
How many cubes are there in the figure given below?



- A) 35 B) 34 C) 33 D) 32 E) 31

11. Aşağıdaki şekilde kaç küp vardır?

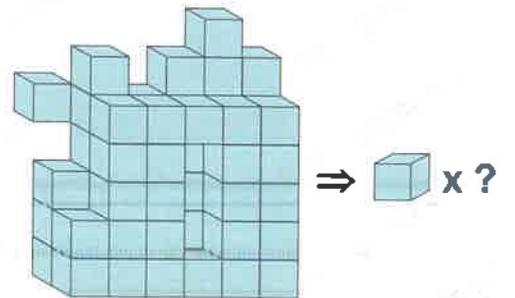
How many cubes are there in the figure given below?



- A) 120 B) 118 C) 112 D) 108 E) 104

12. Aşağıdaki şekilde kaç küp vardır?

How many cubes are there in the figure given below?

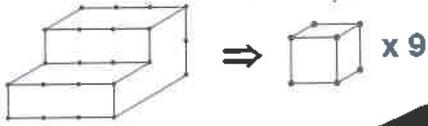


- A) 58 B) 60 C) 61 D) 63 E) 64

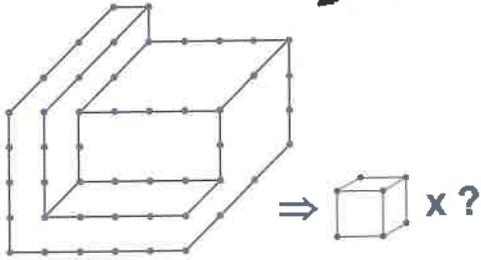
Aşağıda verilen örneğe göre 1 - 12. soruları cevaplayınız.

Answer the questions 1 - 12 according to the example given below.

Örnek (Example)

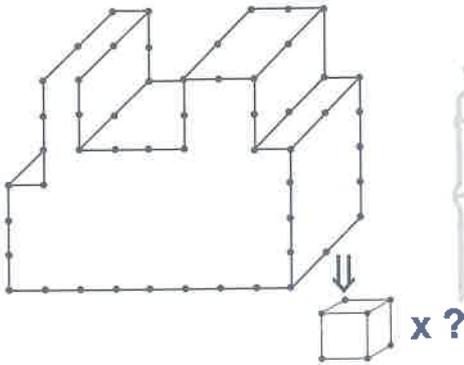


1.



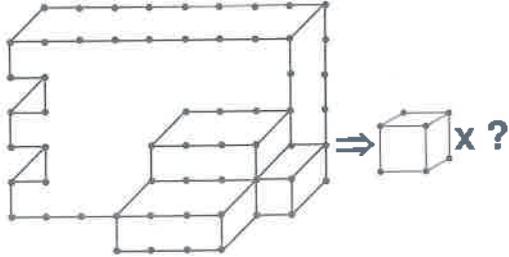
- A) 39 B) 40 C) 41 D) 42 E) 43

2.



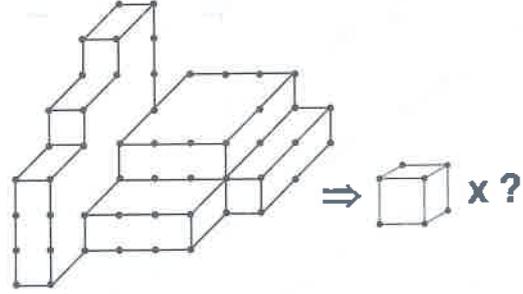
- A) 78 B) 77 C) 75 D) 74 E) 72

3.



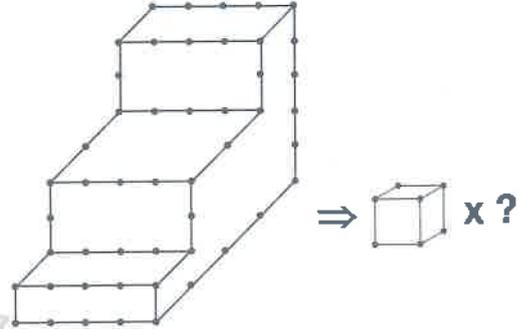
- A) 53 B) 51 C) 50 D) 48 E) 47

4.



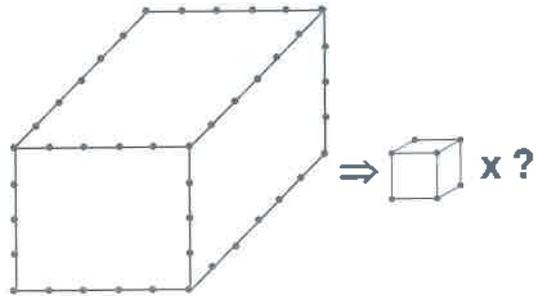
- A) 31 B) 30 C) 29 D) 28 E) 27

5.



- A) 40 B) 42 C) 44 D) 46 E) 48

6.



- A) 100 B) 120 C) 150 D) 180 E) 216

1 - B

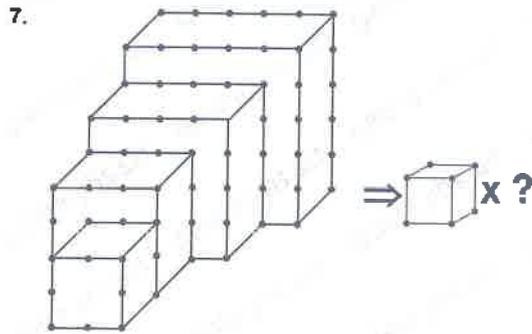
2 - D

3 - D

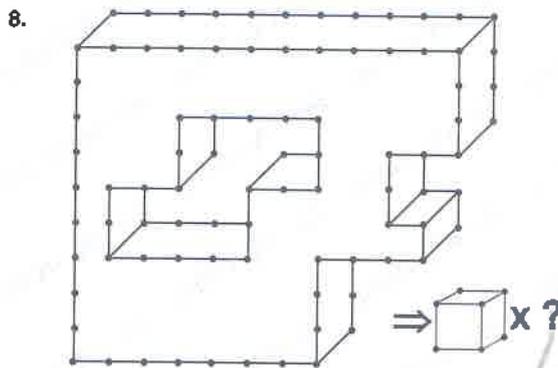
4 - C

5 - E

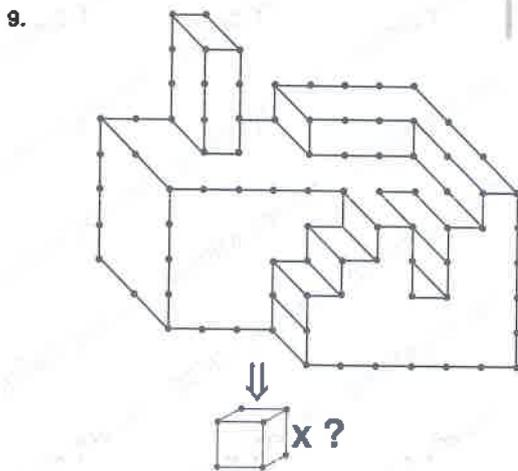
6 - B



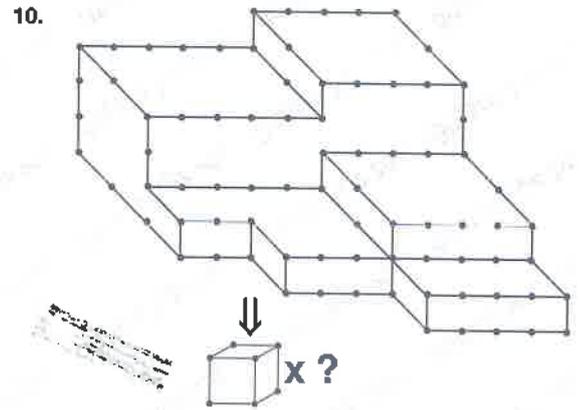
- A) 54 B) 56 C) 58 D) 60 E) 62



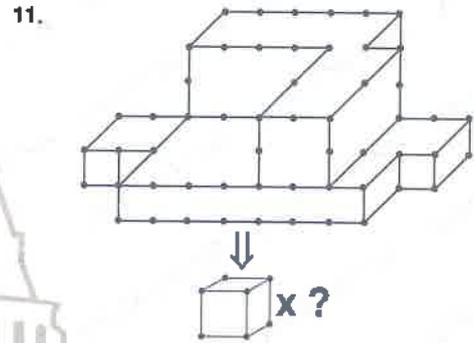
- A) 65 B) 66 C) 67 D) 68 E) 69



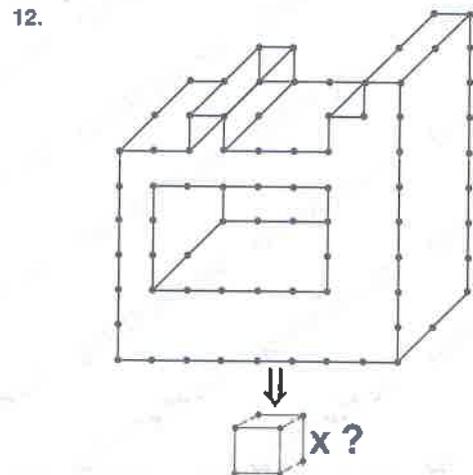
- A) 102 B) 100 C) 98 D) 97 E) 96



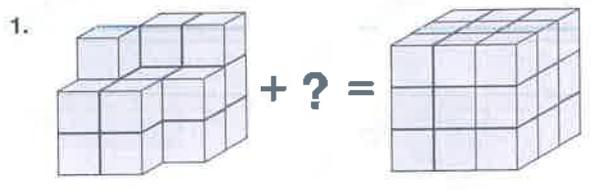
- A) 90 B) 92 C) 94 D) 96 E) 98

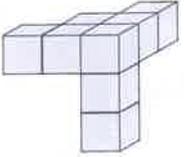
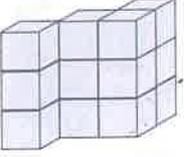
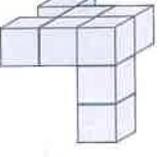
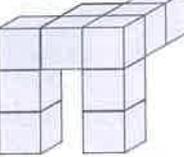
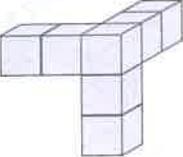


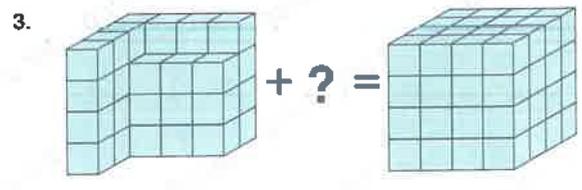
- A) 42 B) 41 C) 40 D) 39 E) 38

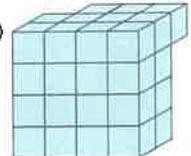
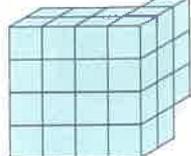
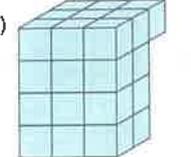
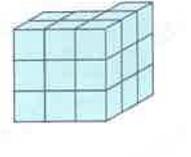
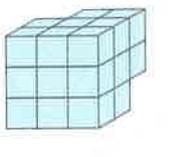


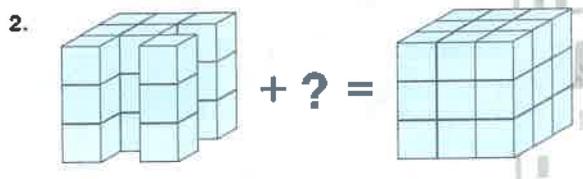
- A) 77 B) 75 C) 74 D) 72 E) 71

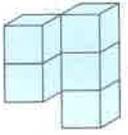
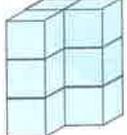
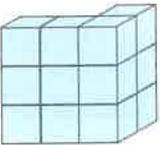
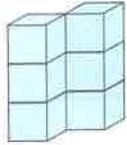
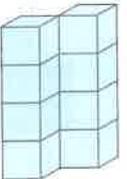


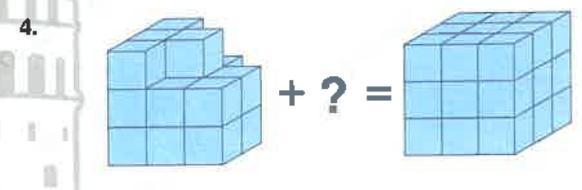
- A) 
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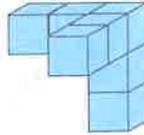
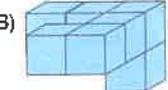
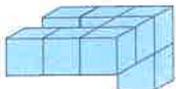
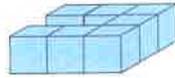
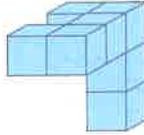


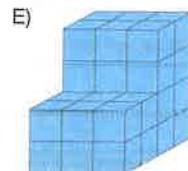
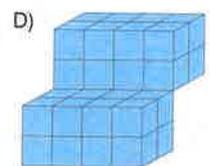
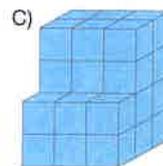
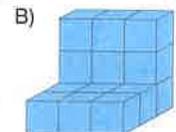
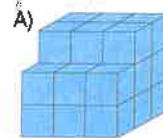
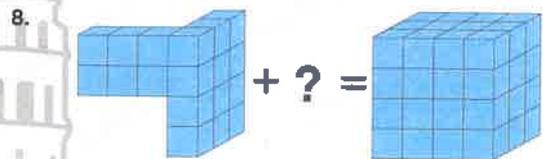
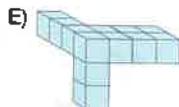
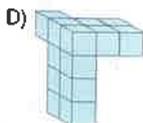
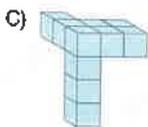
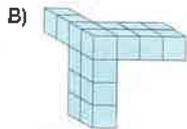
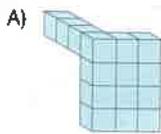
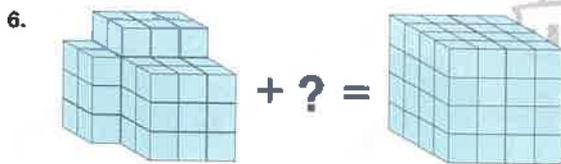
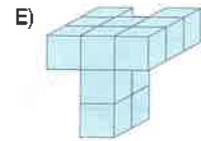
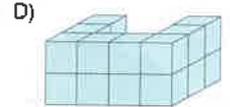
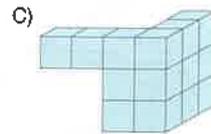
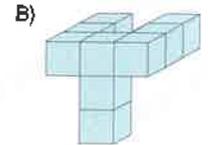
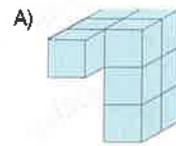
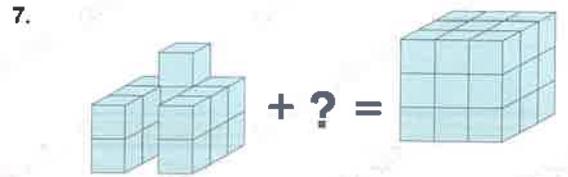
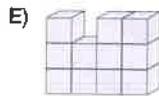
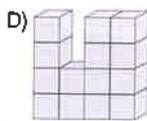
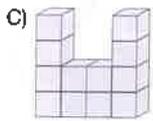
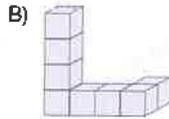
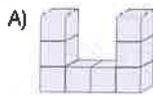
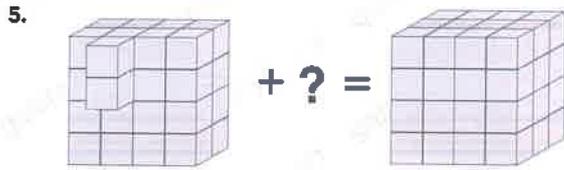
- A) 
- B) 
- C) 
- D) 
- E) 



- A) 
- B) 
- C) 
- D) 
- E) 

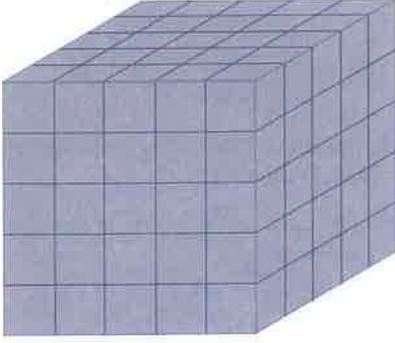


- A) 
- B) 
- C) 
- D) 
- E) 



1 - 4 soruları aşağıdaki şekle göre cevaplayınız.

Answer questions 1 - 4 according to the figure below.



Yukandaki şekil birbirine eş 125 tane küçük küpten oluşmuştur. Bu küçük küplerin dışta kalan tüm yüzeyleri mor renge boyanmıştır.

The figure above is made up of 125 identical small cubes. All outer surfaces of these small cubes are painted purple.

1. İki yüzeyi boyalı küp sayısı kaçtır?

What is the number of cubes with painted surfaces?

- A) 8 B) 24 C) 36 D) 48 E) 54

2. Hiç boyalı olmayan küp sayısı kaçtır?

What is the number of cubes that are not painted?

- A) 8 B) 27 C) 36 D) 81 E) 95

3. Üç yüzeyli boyalı küp sayısı kaçtır?

What is the number of cubes with three surfaces painted?

- A) 4 B) 8 C) 12 D) 16 E) 24

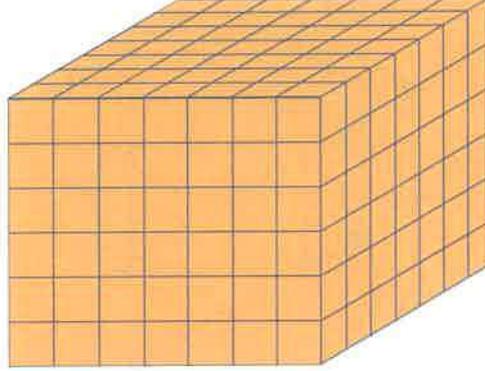
4. Boyasız yüzey sayısı kaçtır?

What is the number of unpainted surfaces?

- A) 150 B) 300 C) 450 D) 600 E) 750

5 - 6 soruları aşağıdaki şekle göre cevaplayınız.

Answer questions 5 - 6 according to the figure below.



Yukandaki şekil birbirine eş 216 tane küçük küpten oluşmuştur. Bu küçük küplerin dışta kalan tüm yüzeyleri turuncu renge boyanmıştır.

The figure above is made up of 216 identical small cubes. All the outer surfaces of these small cubes are painted orange.

5. En az bir yüzeyi boyalı küp sayısı kaçtır?

What is the number of cubes with at least one surface painted?

- A) 225 B) 216 C) 194 D) 194 E) 130

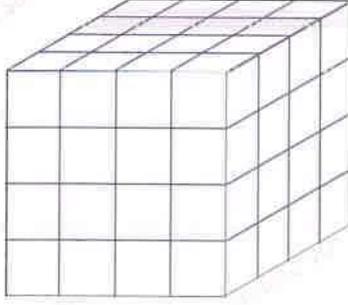
6. En fazla iki yüzeyi boyalı küp sayısı kaçtır?

What is the maximum number of cubes with two surfaces painted?

- A) 56 B) 100 C) 200 D) 230 E) 286

7 - 8 soruları aşağıdaki şekle göre cevaplayınız.

Answer questions 7 - 8 according to the figure below.



Yukarıdaki büyük küp birbirine eş 64 tan küçük küpten oluşmuştur. Büyük küpün herhangi iki yüzeyi sarıya başka iki yüzeyi laciverte boyanıyor.

The big cube above is made up of 64 identical small cubes. Both sides of the big cube are painted yellow and the other two surfaces are dark blue.

7. Bir yüzü sarı, bir yüzü lacivert olan en az kaç küp vardır?

At least how many cubes are there, one side yellow and one side dark blue?

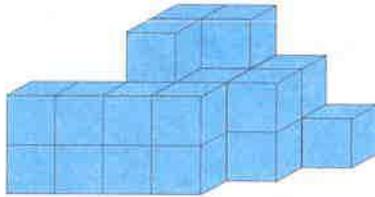
A) 3 B) 4 C) 5 D) 6 E) 7

8. Bir yüzü sarı, bir yüzü lacivert olan en çok kaç küp vardır?

At most how many cubes are there, one side yellow and one side dark blue?

A) 12 B) 11 C) 10 D) 9 E) 8

9.

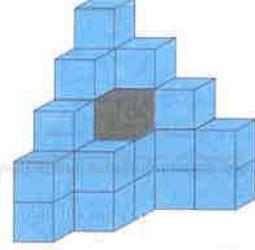


Şekilde dış yüzeyler maviye boyanırsa hiç boyalı olmayan küp sayısı kaçtır?

In the figure the outer surfaces are painted blue, what is the number of cubes that are not painted at all?

A) 0 B) 1 C) 2 D) 3 E) 4

10.



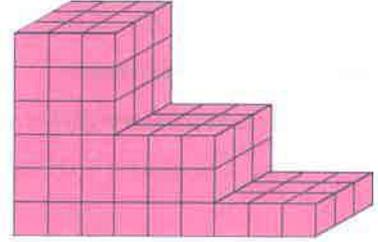
Yukarıdaki siyah küpü tamamen kapatmak için kaç tane küpe ihtiyaç vardır?

How many cubes are needed to completely cover the black cube above?

A) 2 B) 3 C) 4 D) 5 E) 6

11 - 12 soruları aşağıdaki şekle göre cevaplayınız.

Answer questions 11 - 12 according to the figure below.



Yukarıda eş küplerden oluşan şeklin tüm yüzeyleri fuşya renge boyanıyor.

All surfaces of the shape above consisting of identical cubes are painted in fuchsia color.

11. Üç yüzeyi boyalı küp sayısı kaçtır?

What is the number of cubes with three surfaces painted?

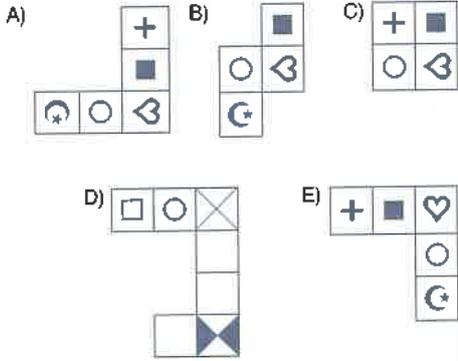
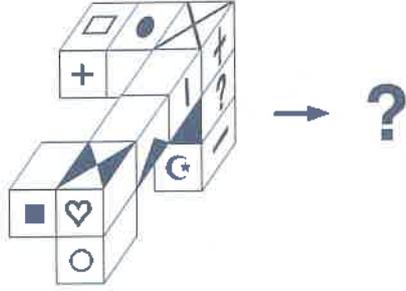
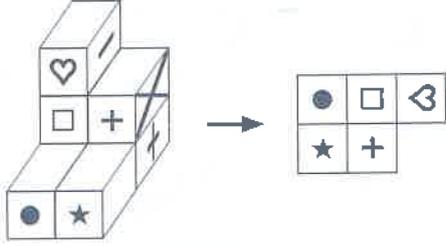
A) 13 B) 12 C) 11 D) 10 E) 9

12. Hiç boyalı olmayan küp sayısı kaçtır?

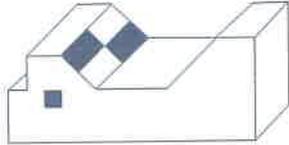
What is the number of cubes that are not painted at all?

A) 6 B) 7 C) 8 D) 9 E) 10

1.

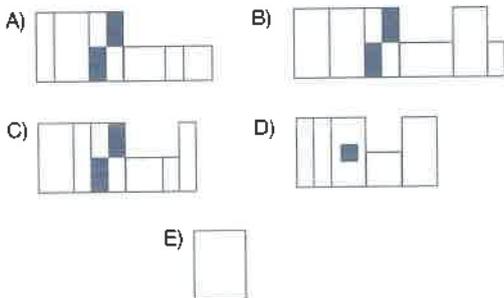


2.

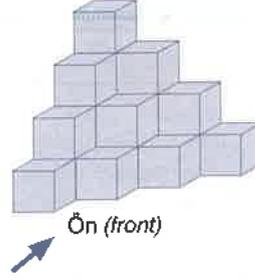


Verilen şeklin üstten görünüşü nasıldır?

What is the top view of the given figure?

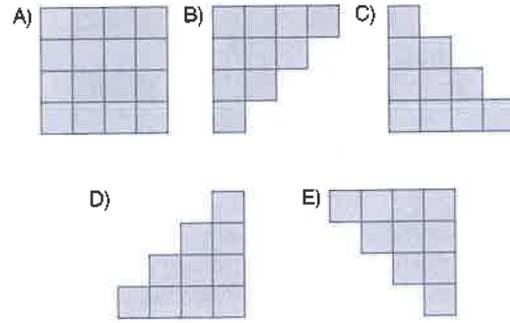


3.



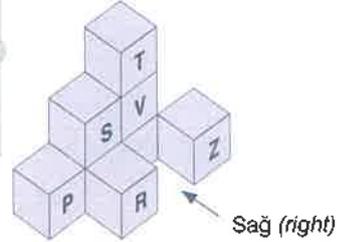
Şeklin önden görünüşü nasıldır?

What is the front view of the figure?



4 - 5 soruları aşağıdaki şekle göre cevaplayınız.

Answer questions 4 - 5 according to the figure below.



4. Şekilden harflerle belirtilen küplerden hangisi çıkarılırsa önden görünüşünün kağıda çizilmiş şekli değişmez?

Which of the cubes indicated by letters is removed from the figure that the front view does not change the shape drawn on paper?

A) R B) P C) S D) Z E) T

5. Bu şekle sol yandan bakıldığında kaç küp gözükür?

How many cubes are seen when looking at this figure from the left side?

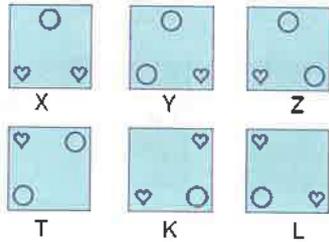
A) 3 B) 4 C) 5 D) 6 E) 7

6 – 8 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 6 – 8 according to the information below.

Aşağıda X, Y, Z, T, K ve L olarak isimlendirilmiş oyun kartları eşit boyutlardadır. Kartların üzerine şekillerdeki gibi kalp şekli çizilmiş ve kalp şeklinin sığabileceği büyüklükte yuvarlak parçalar kartlardan kesilmiştir.

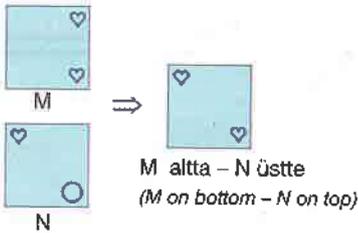
The playing cards named X, Y, Z, T, K, and L below are of equal size. A heart shape is drawn on the cards as in the shapes, and round pieces that are large enough to fit the heart shape are cut from the cards.



Bu kartlar iki veya daha fazlası üst üste getirilerek çeşitli görünüm elde ediliyor. Ancak kartları üst üste koyarken döndürme ve çevirme yapılmıyor. "♥" şeklinin görünebilmesi için "♥" en üstte yer almalı veya "○" parçayla örtülecek şekilde üst üste gelmelidir.

Two or more of these cards are superimposed to create various looks. However, rotating and flipping is not done when putting cards on top of each other. "♥" must be at the top or "♥" must be overlapped to match the part so that "○" is visible.

Örnek (Example):



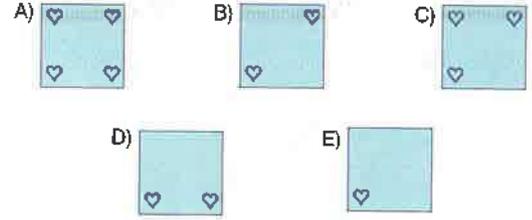
6. Aşağıdakilerden hangisi belirtilen biçimde üst üste koyulursa üç kalp şekli görünür?

Which of the following superimpose three heart shapes in the specified way?

- A) T üstte – L altta (T on top – L on bottom)
- B) Y üstte – X altta (Y on top – X on bottom)
- C) K üstte – T altta (K on top – T on bottom)
- D) K üstte – Y altta (K on top – Y on bottom)
- E) X üstte – K altta (X on top – K on bottom)

7. Y en üstte, T ortada ve K en alta konulacak biçimde üst üste getirildiğinde hangi şekil elde edilir?

What shape is obtained when superimposing Y at the top, T in the middle, and K at the bottom?



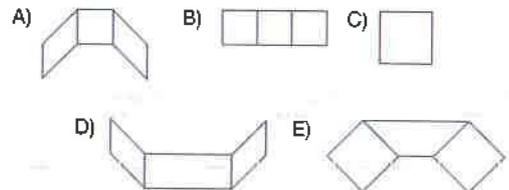
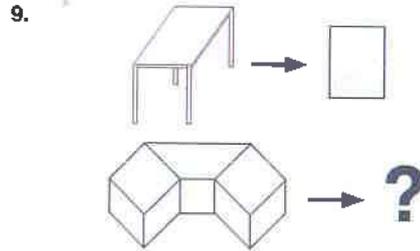
Yukarıdaki şekil K, X ve T kartları kullanılarak elde edilmiştir.

Bu üç kartın alttan üste doğru sıralanışı nasıldır?

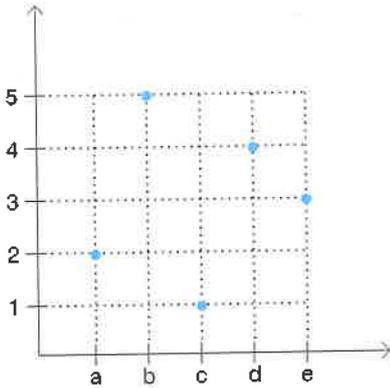
The figure above is obtained using K, X and T cards.

How are these three cards arranged from bottom to top?

- A) X - T - K
- B) X - K - T
- C) K - X - T
- D) T - K - X
- E) T - X - K



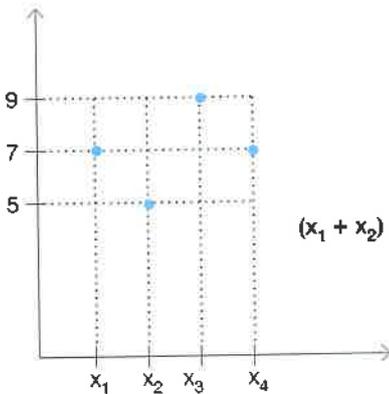
1.



$d \cdot e = 12$
 $a \cdot b + b \cdot c + a \cdot c = ?$

- A) 12 B) 15 C) 17 D) 20 E) 24

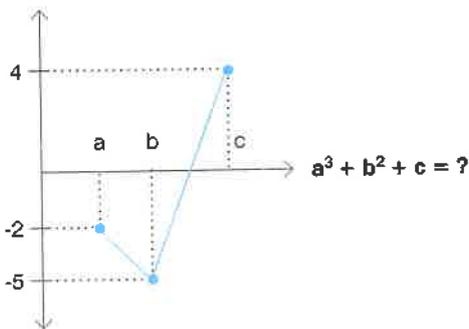
2.



$(x_1 + x_2) \cdot (x_3 - x_4) = ?$

- A) 18 B) 24 C) 27 D) 30 E) 36

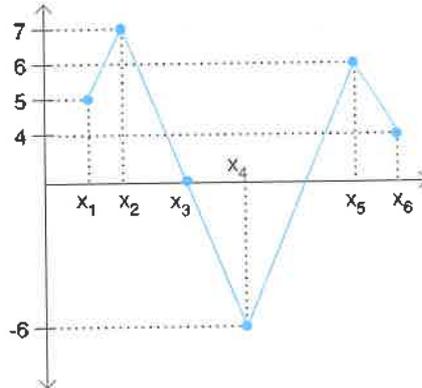
3.



$a^3 + b^2 + c = ?$

- A) 19 B) 20 C) 21 D) 22 E) 23

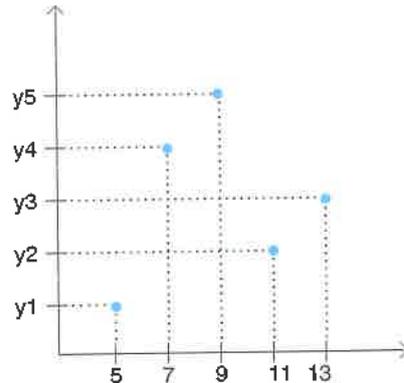
4.



$2x_1 + x_2 - 5x_3 + x_4(x_5 - x_6) = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

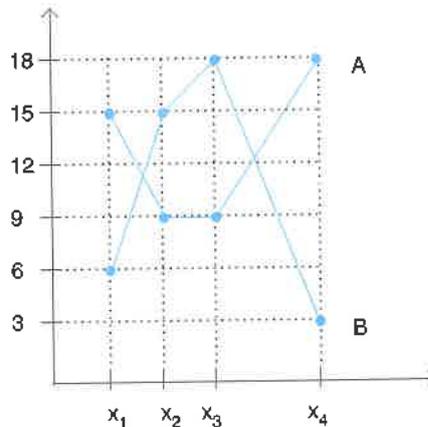
5.



$\sqrt{y_1 + y_3 + y_5} = ?$

- A) 2 B) 3 C) 4 D) 5 E) 7

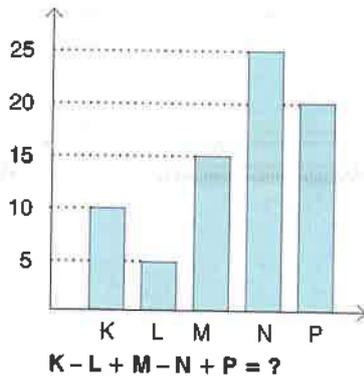
6.



$Bx_1 - Ax_2 + Bx_3 - Ax_4 = ?$

- A) -3 B) -2 C) 0 D) 6 E) 8

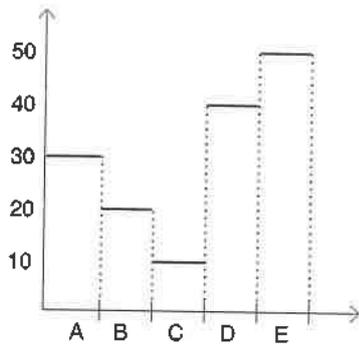
7.



$$K - L + M - N + P = ?$$

- A) K B) L C) M D) N E) P

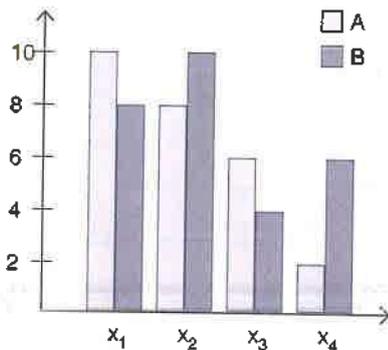
8.



$$A - B + C - D + E = ?$$

- A) B B) C C) D D) E

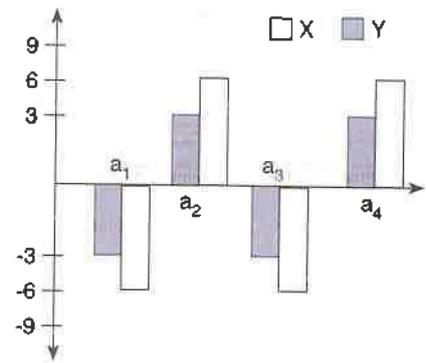
9.



$$\frac{Ax_1 + Bx_3}{Ax_2 + Bx_4} = ?$$

- A) 1 B) 3 C) 5 D) 7 E) 9

10.

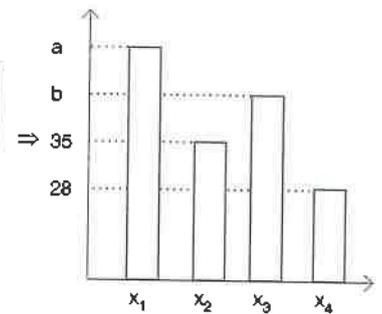


$$(Ya_4 - Xa_1) \cdot (Ya_2 + Xa_3) = ?$$

- A) -72 B) -48 C) 0 D) 24 E) 60

11.

x ₁	8
x ₂	5
x ₃	7
x ₄	4

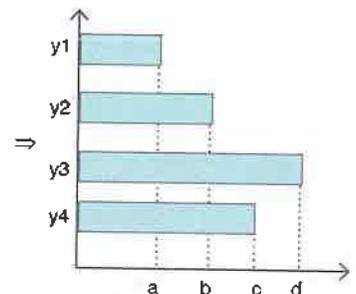


$$a + b = ?$$

- A) 95 B) 100 C) 105 D) 110 E) 115

12.

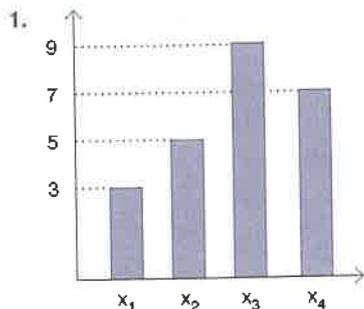
y ₁	3
y ₂	5
y ₃	9
y ₄	6



$$a + b - 32$$

$$d - c = ?$$

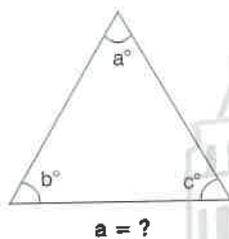
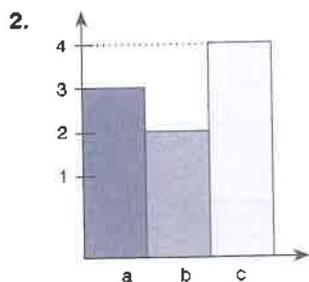
- A) 10 B) 12 C) 14 D) 16 E) 18



$$x_1 + x_2 + x_3 + x_4 = 120$$

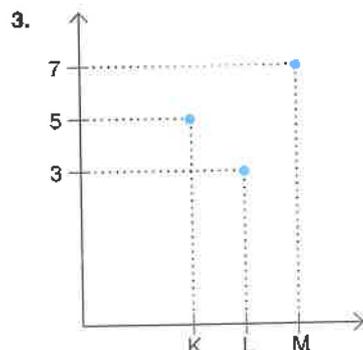
$$x_3 = ?$$

- A) 35 B) 45 C) 50 D) 75 E) 90



$$a = ?$$

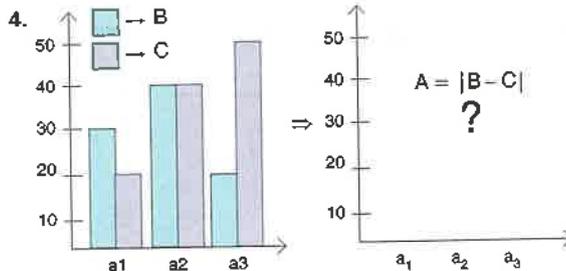
- A) 40 B) 50 C) 60 D) 70 E) 80



$$K - 2L + M = 360$$

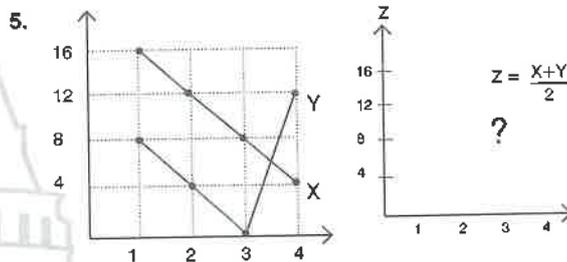
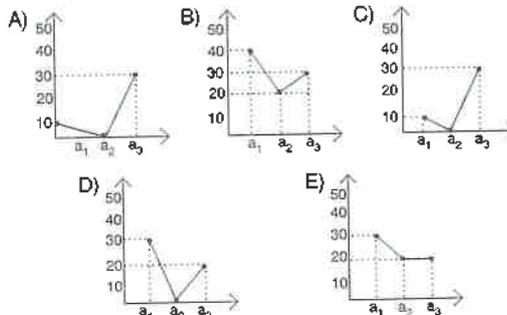
$$L = ?$$

- A) 120 B) 150 C) 160 D) 180 E) 200



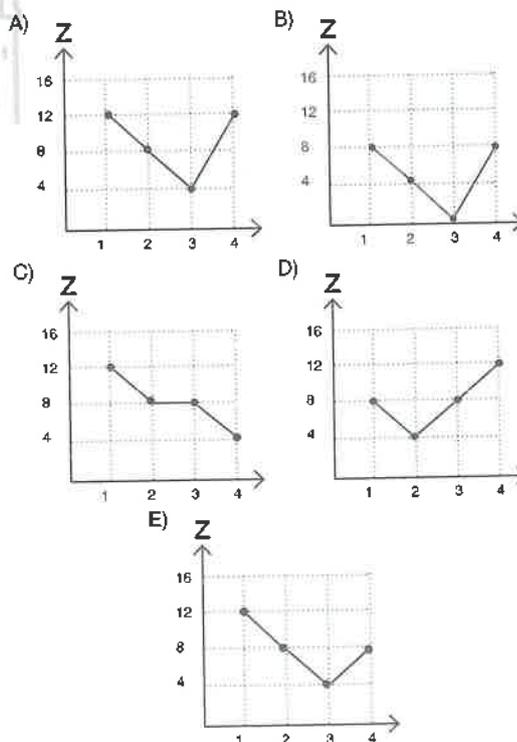
$$A = |B - C|$$

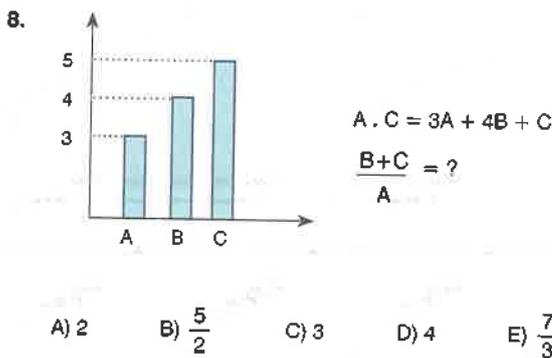
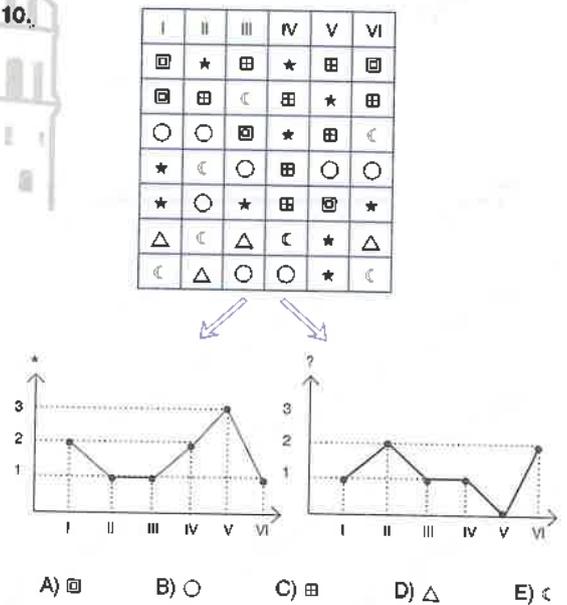
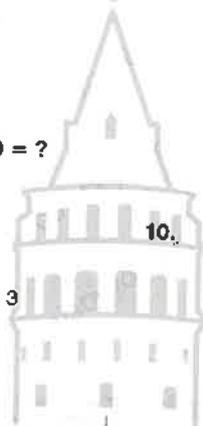
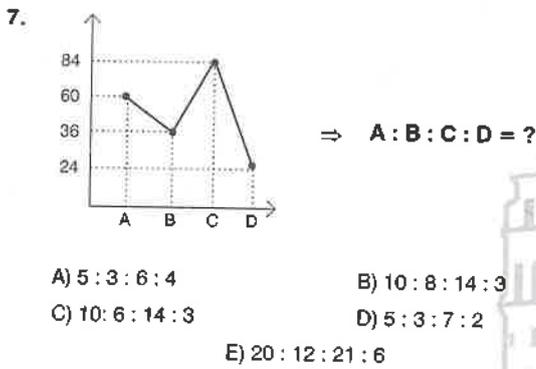
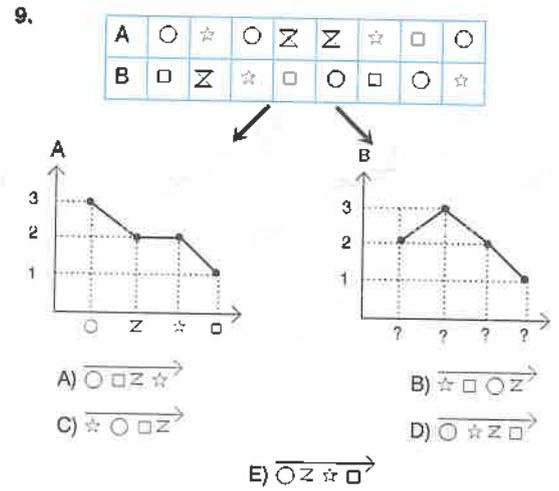
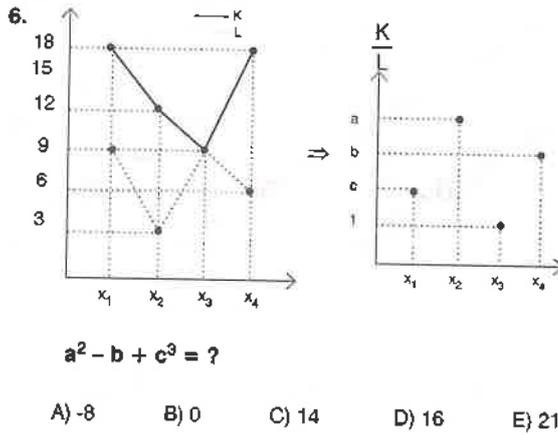
$$? = ?$$

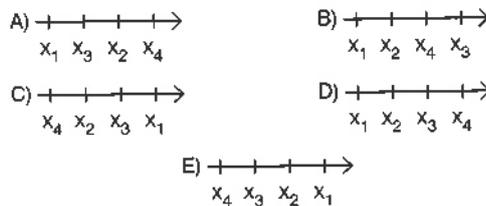
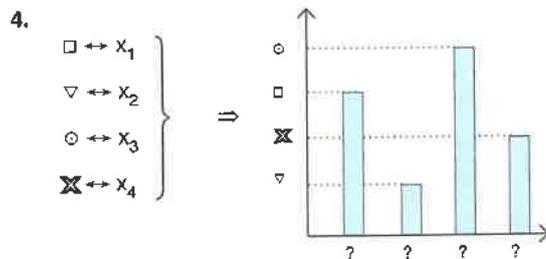
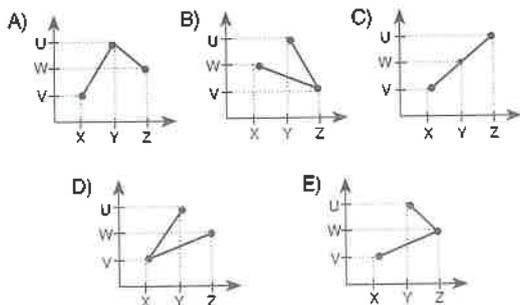
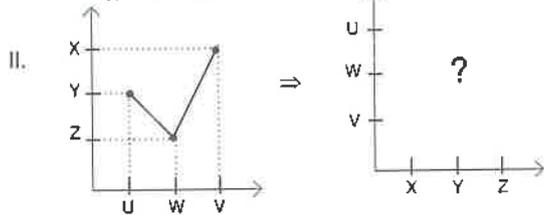
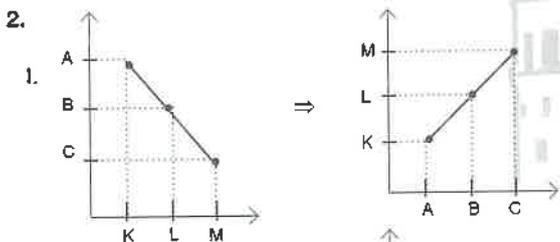
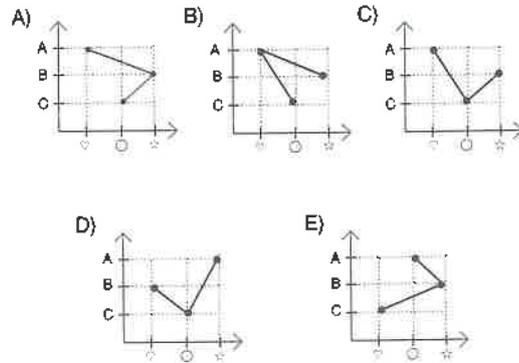
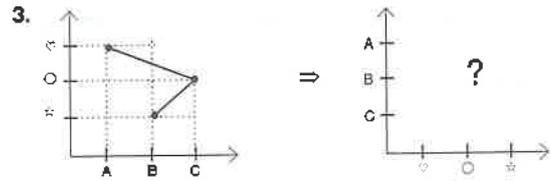
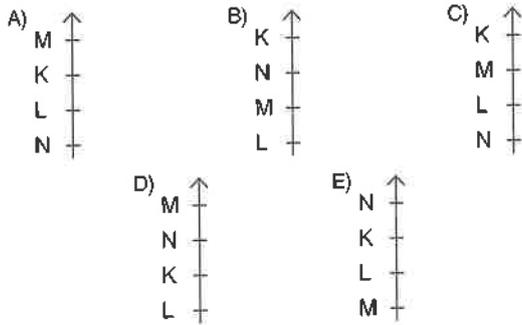
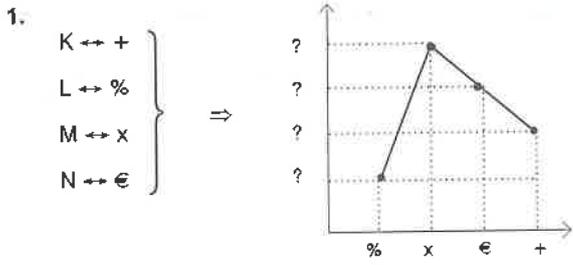


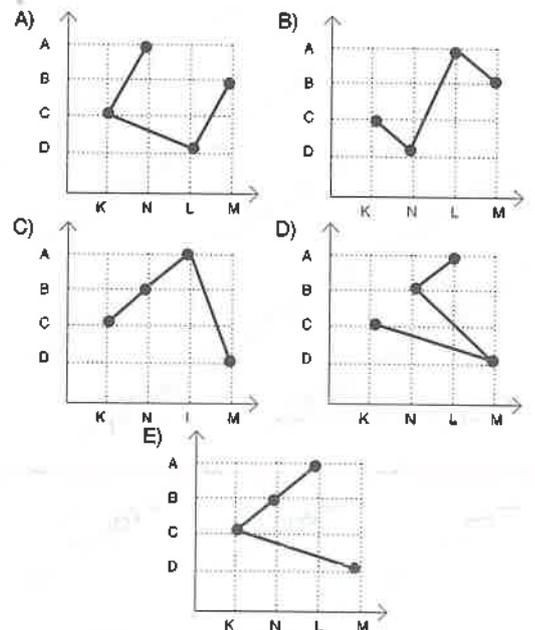
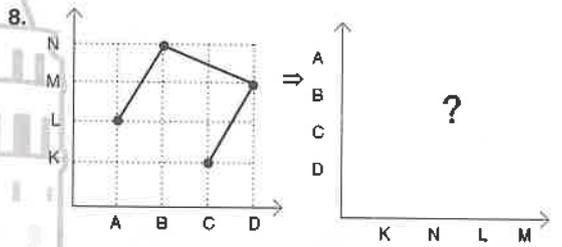
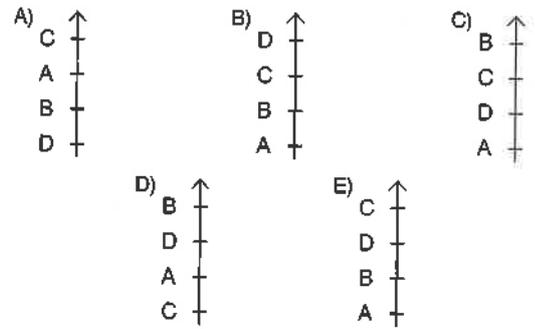
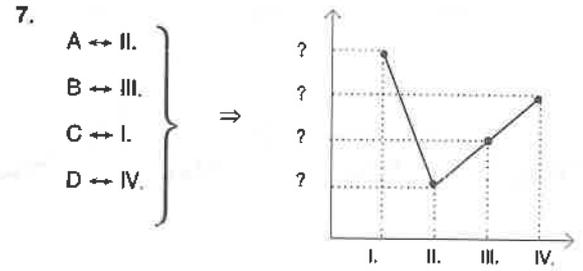
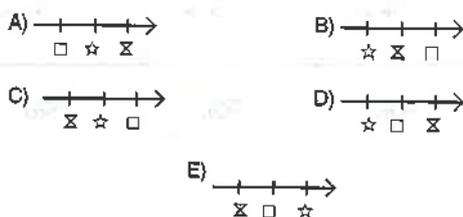
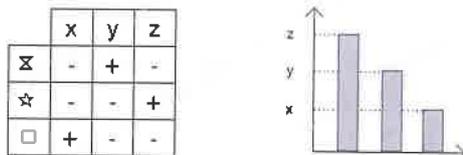
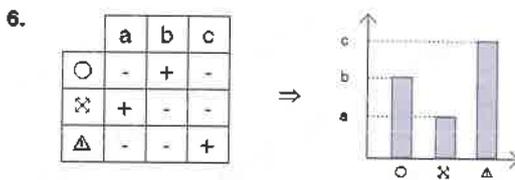
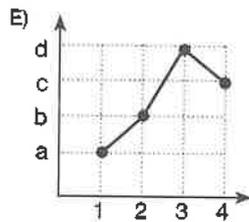
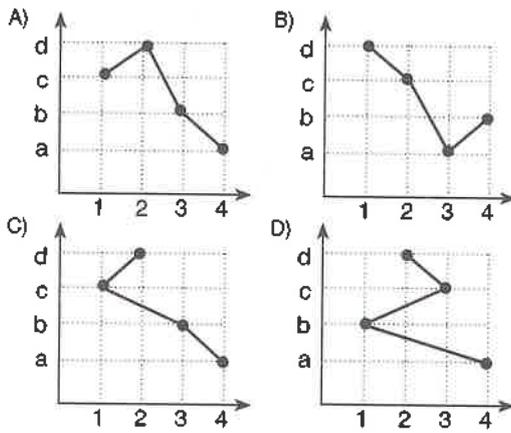
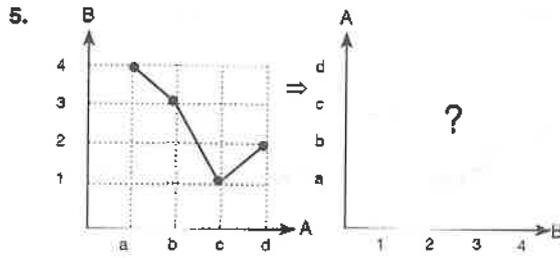
$$Z = \frac{X+Y}{2}$$

$$? = ?$$

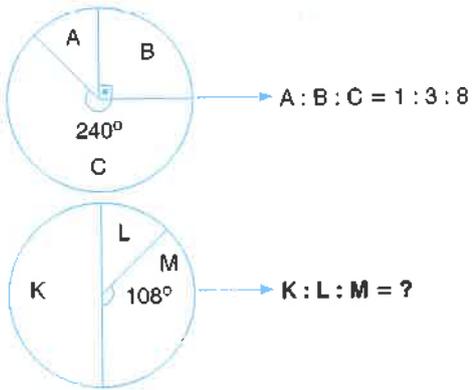






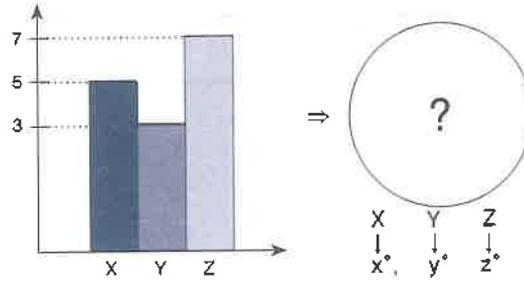


1.



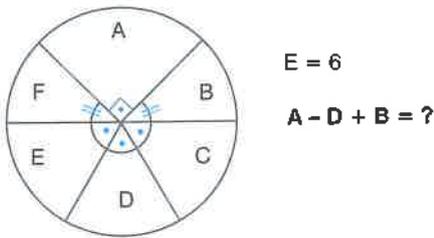
- A) 9 : 2 : 7 B) 8 : 3 : 5
 C) 9 : 4 : 5 D) 5 : 2 : 3
 E) 12 : 5 : 7

4.



- A) $135^\circ, 50^\circ, 175^\circ$ B) $120^\circ, 30^\circ, 210^\circ$
 C) $120^\circ, 72^\circ, 168^\circ$ D) $135^\circ, 54^\circ, 171^\circ$
 E) $100^\circ, 50^\circ, 210^\circ$

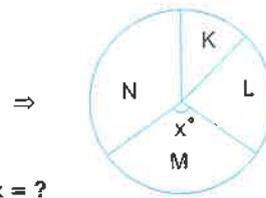
2.



- A) 6 B) 7,5 C) 8 D) 8,5 E) 9

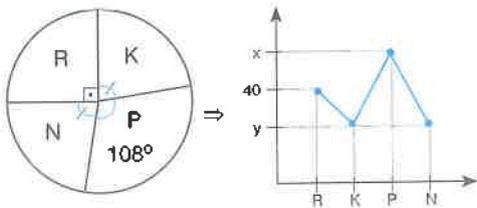
5.

K	7
L	11
M	12
N	15



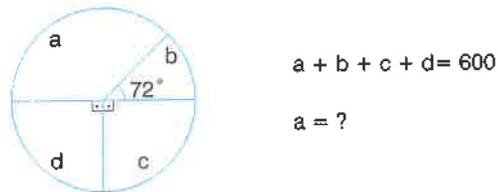
- A) 72 B) 84 C) 96 D) 108 E) 120

3.



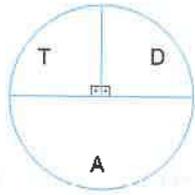
- A) 9 B) 10 C) 12 D) 15 E) 16

6.



- A) 90 B) 100 C) 120 D) 150 E) 180

7.

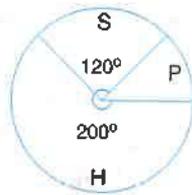


$$T = \frac{1}{4}, D = \frac{1}{4}, A = \frac{1}{2}$$

A) $\frac{1}{8}, \frac{1}{4}, \frac{5}{8}$

C) $\frac{1}{10}, \frac{3}{10}, \frac{3}{5}$

E) $\frac{1}{3}, \frac{1}{6}, \frac{1}{2}$

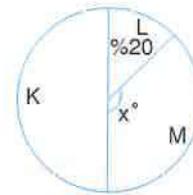


$$S = ?, P = ?, H = ?$$

B) $\frac{1}{4}, \frac{1}{3}, \frac{5}{12}$

D) $\frac{1}{3}, \frac{1}{9}, \frac{5}{9}$

10.



$$x = ?$$

A) 96

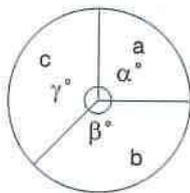
B) 108

C) 120

D) 128

E) 144

8.



$$3a = 2b$$

$$4b = 3c$$

$$2\alpha - \beta + \gamma = ?$$

A) 120

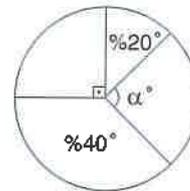
B) 140

C) 160

D) 180

E) 200

11.



$$\alpha = ?$$

A) 36

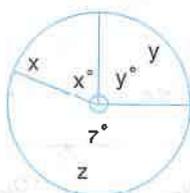
B) 45

C) 54

D) 63

E) 72

9.



$$\frac{X}{Y} = \frac{1}{3}$$

$$\frac{Y}{Z} = \frac{1}{2}$$

$$x - y + z = ?$$

A) 72

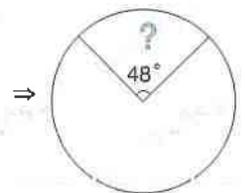
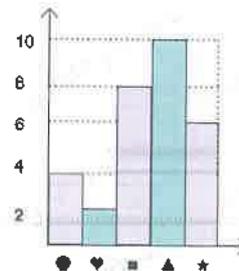
B) 108

C) 144

D) 180

E) 200

12.



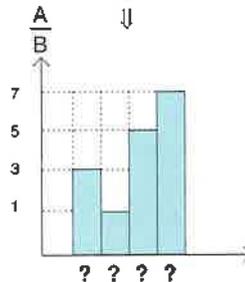
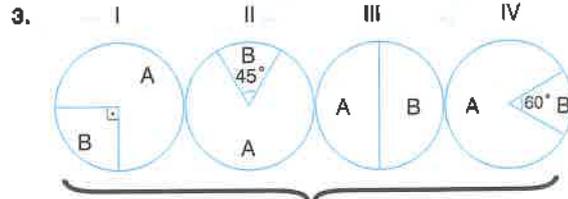
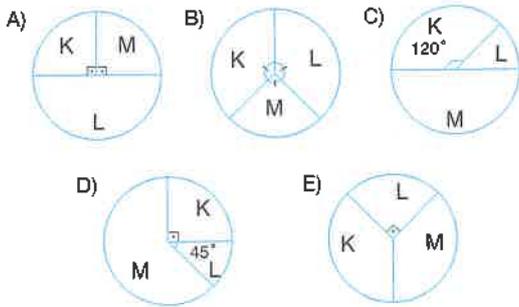
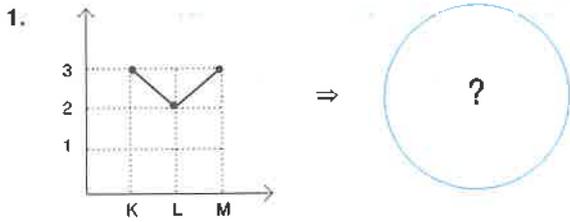
A) ●

B) ♥

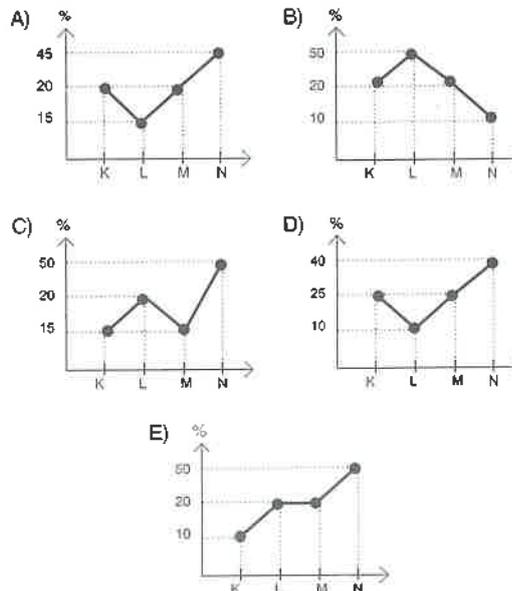
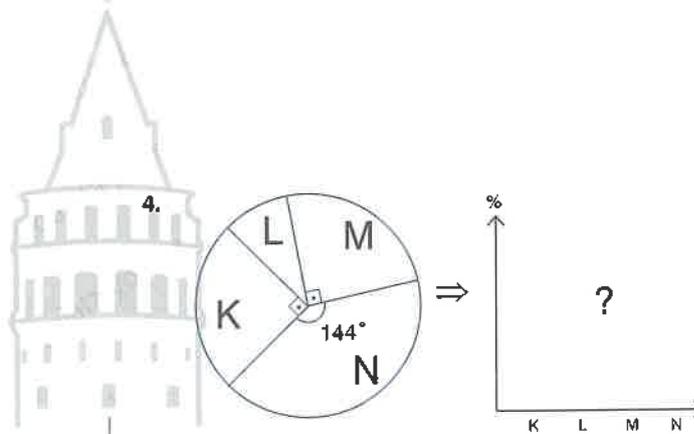
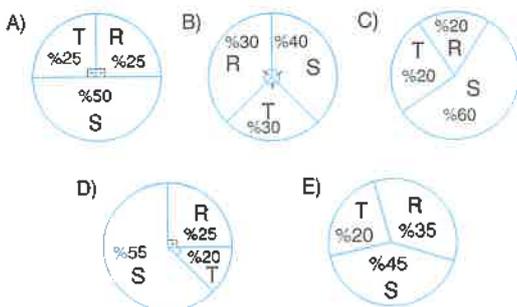
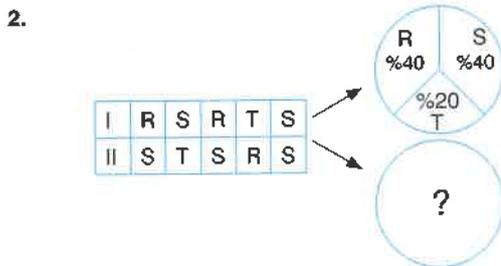
C) ■

D) ▲

E) ★



- A) I, III, II, IV B) I, III, IV, II C) II, III, I, IV
D) IV, III, I, II E) IV, III, II, I



5.

I	☆	□	⊕	♥	○	♥	⊕
II	⊕	○	♥	⊕	♥	⊕	♥
III	○	⊕	☆	□	⊕	♥	⊕

⇒

A) B) C)

D) E)

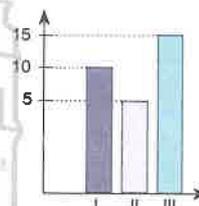
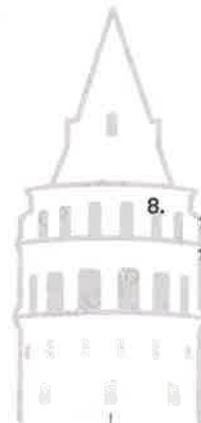
7.

$$20A = 15B = 12C = 10D$$

⇒

A) B) C) D) E)

8.



⇒

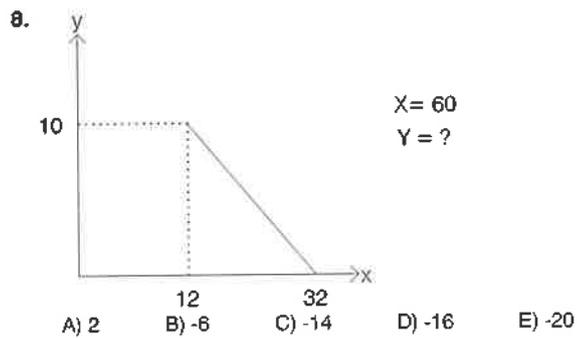
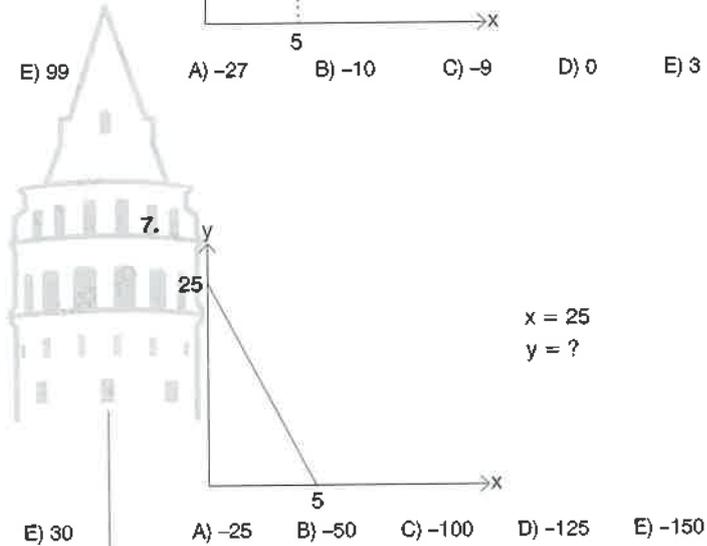
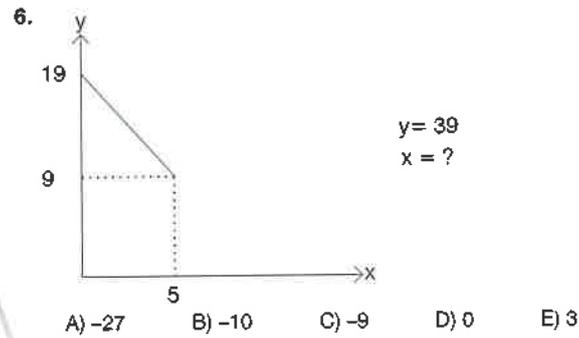
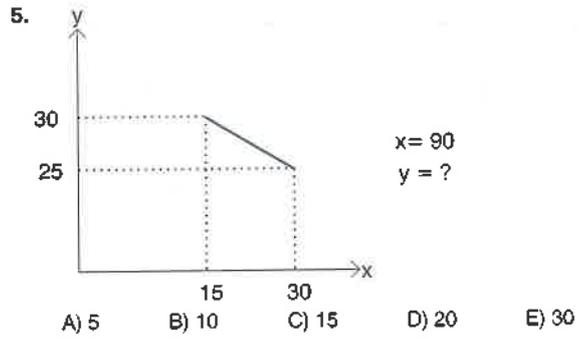
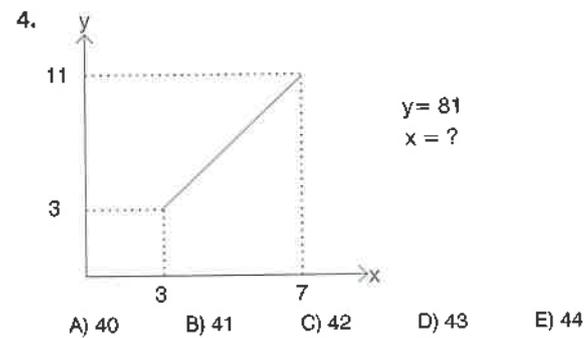
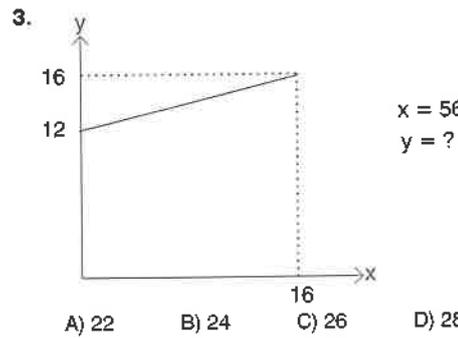
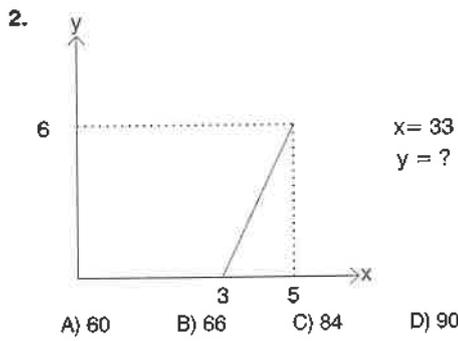
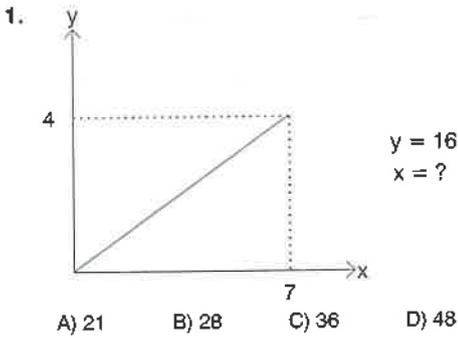
6.

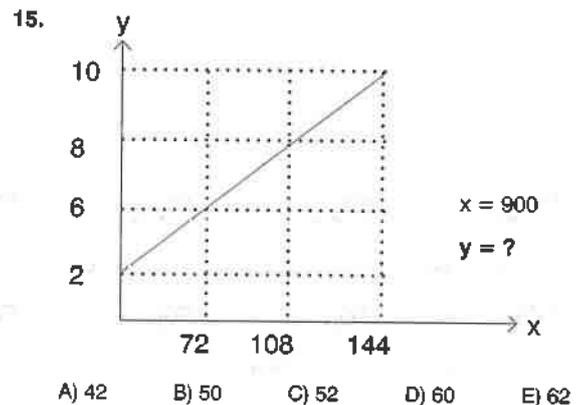
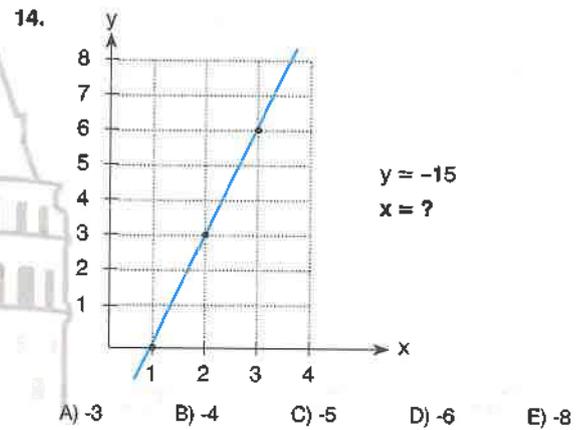
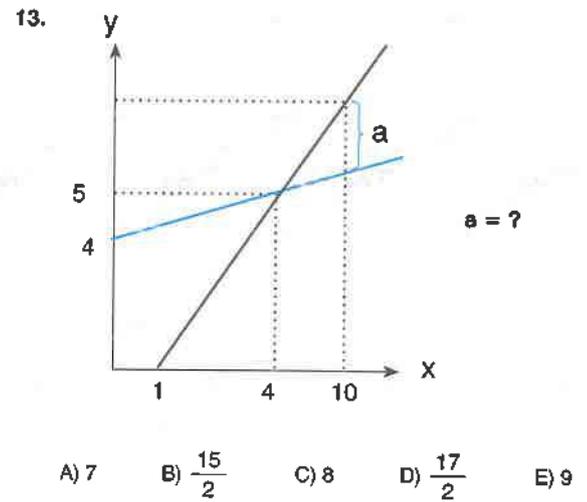
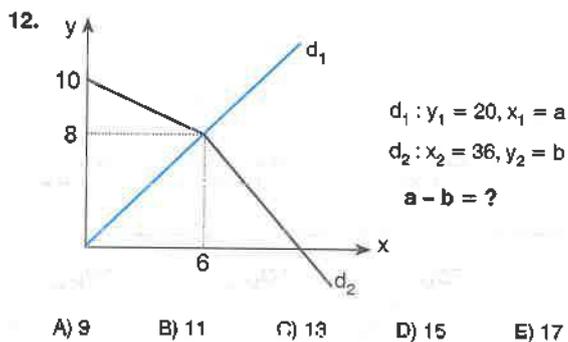
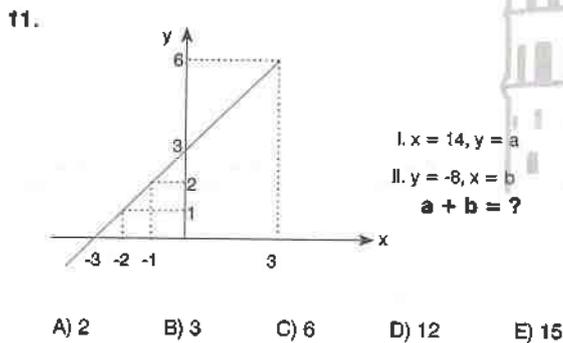
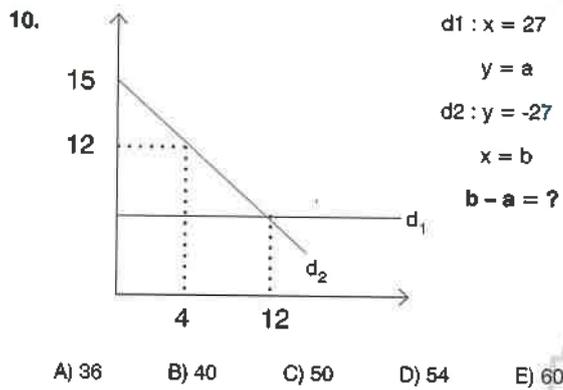
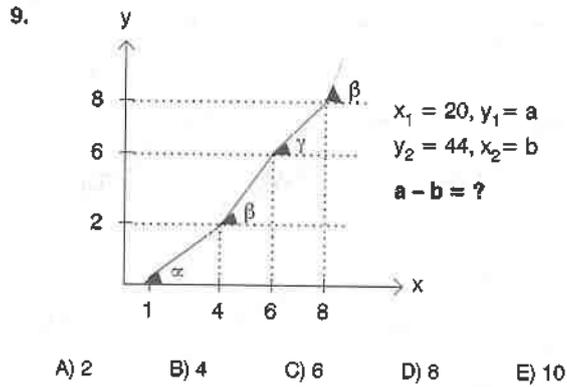
$$2K = 3L = 6M$$

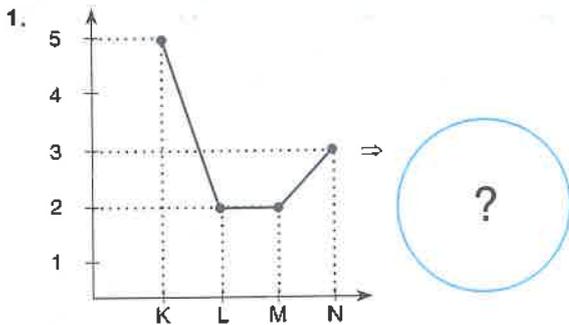
⇓

A) B) C) D) E)

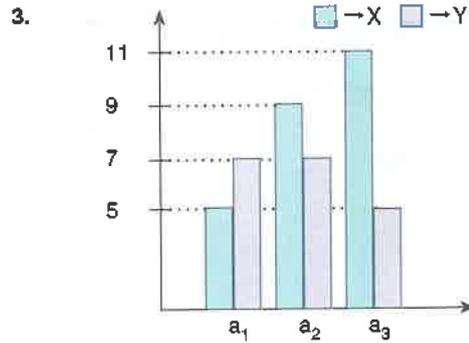
A) B) C) D) F)





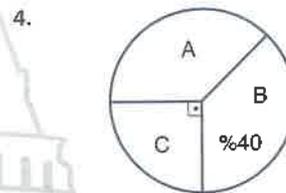


- A) B) C) D) E)



$Xa_3 - Ya_2 + Xa_1 = ?$

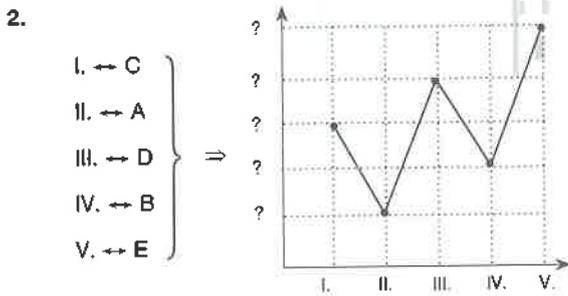
- A) 3 B) 5 C) 7 D) 9 E) 11



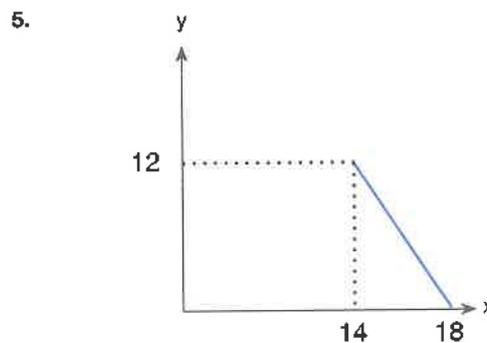
$A + B - C = 30$

$A = ?$

- A) 15 B) 18 C) 21 D) 24 E) 28



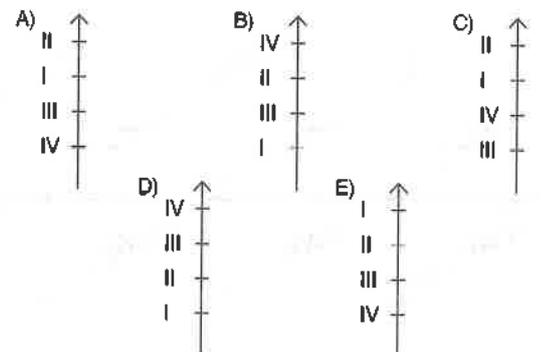
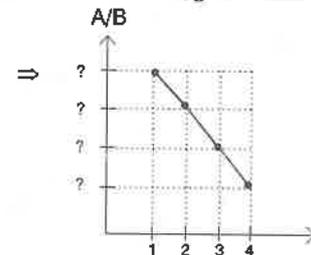
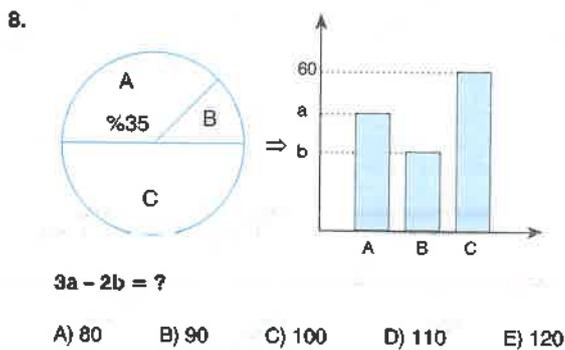
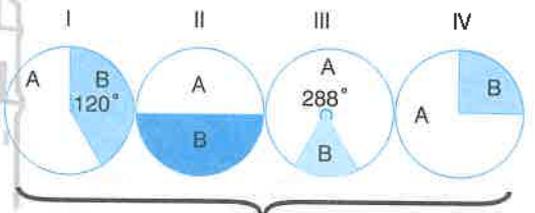
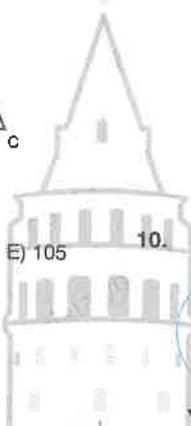
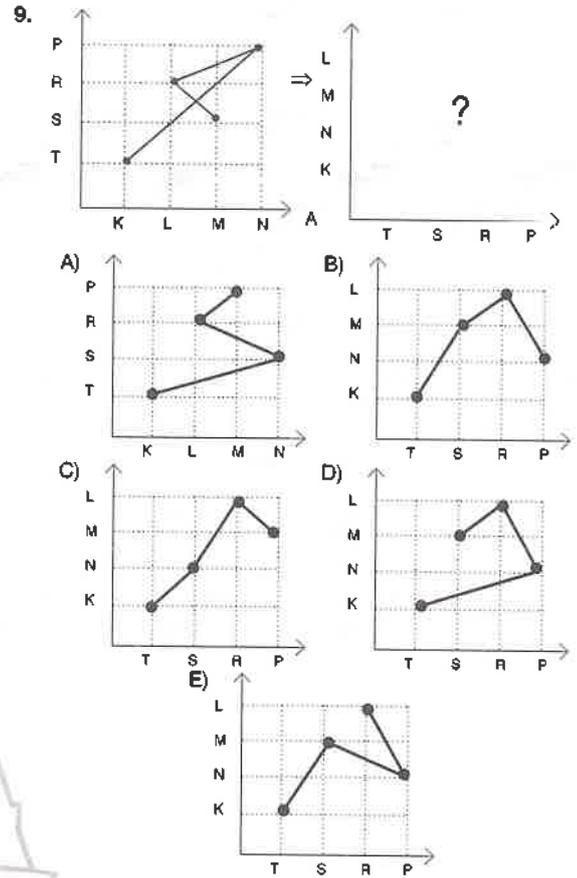
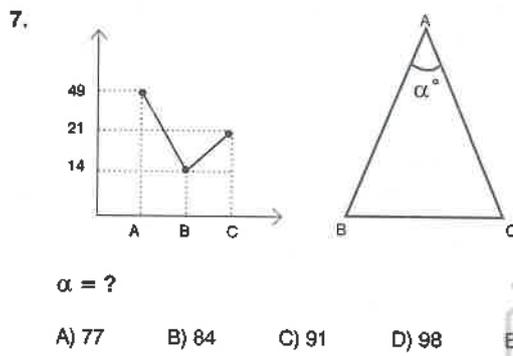
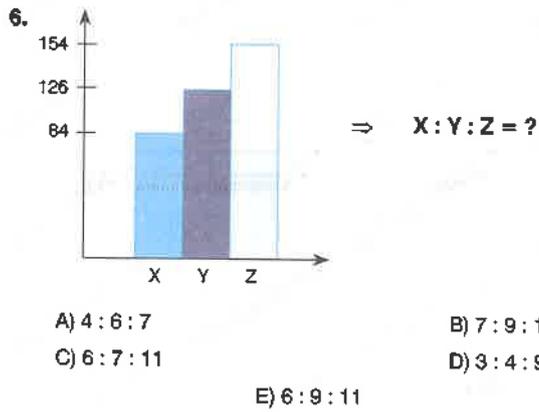
- A) B) C) D) E)

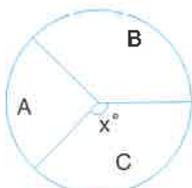


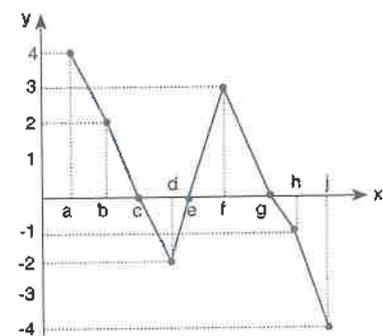
$y = -15x + 210$

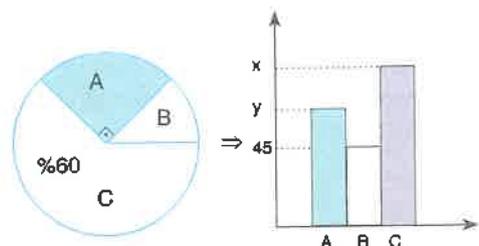
$x = ?$

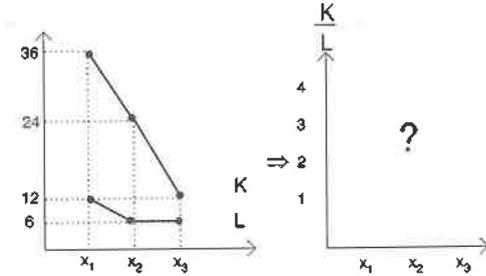
- A) 21 B) 23 C) 25 D) 27 E) 28

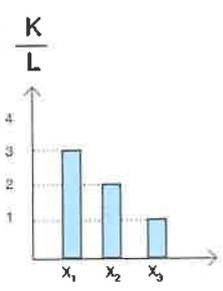
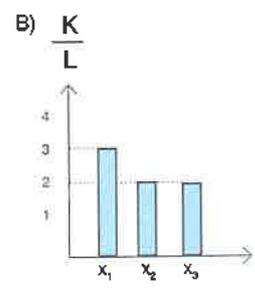


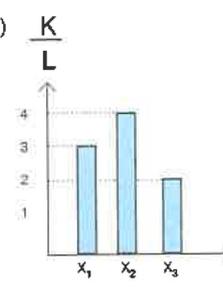
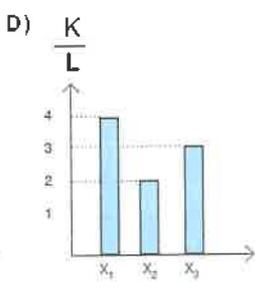
1.  $15A = 12B = 10C$
 $x = ?$
 A) 90 B) 96 C) 128 D) 144 E) 150

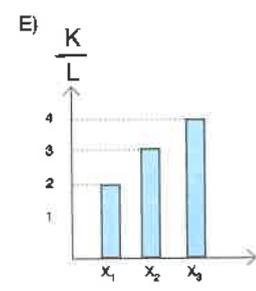
2. 
 $3d - 4g + a - h = ?$
 A) -5 B) -1 C) 0 D) 2 E) 4

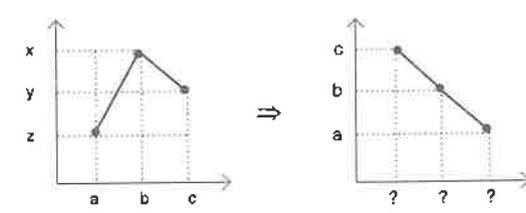
3. 
 $x - y = ?$
 A) 105 B) 115 C) 125 D) 135 E) 140

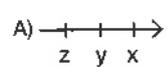
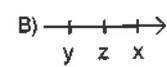
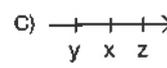
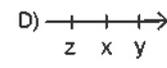
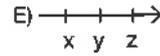
4. 

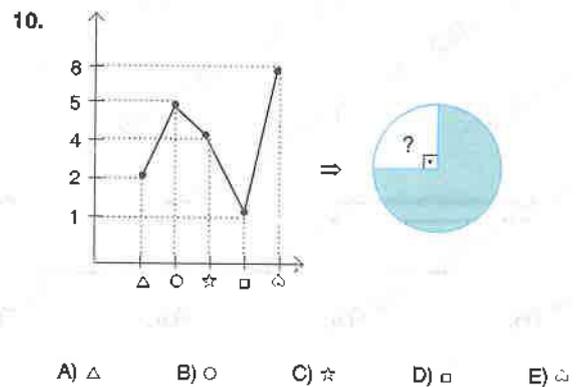
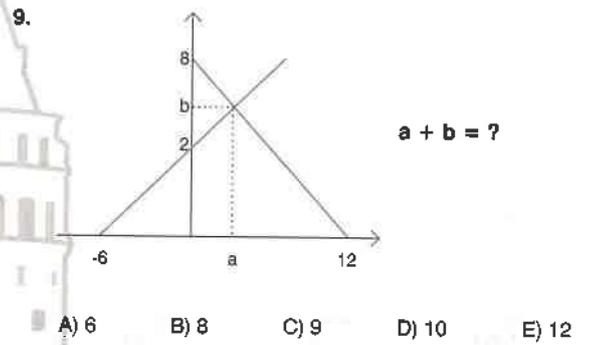
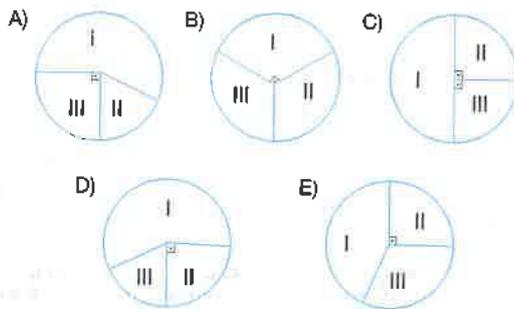
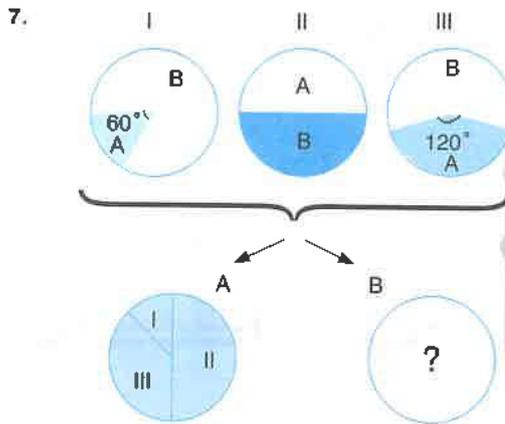
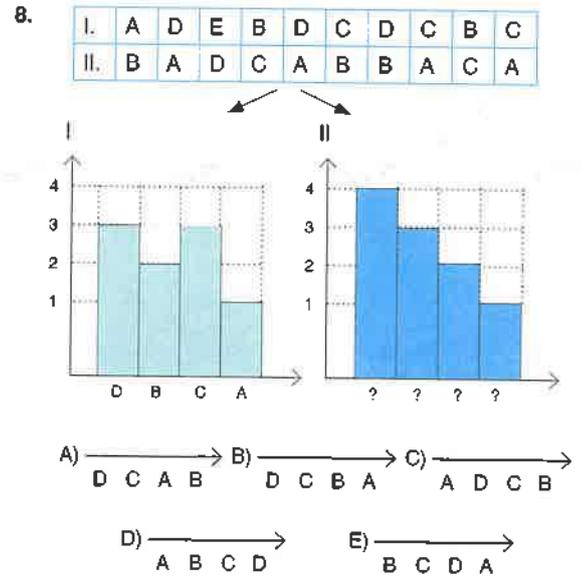
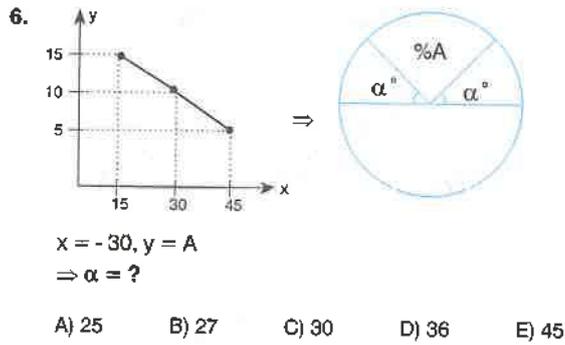
A)  B) 

C)  D) 

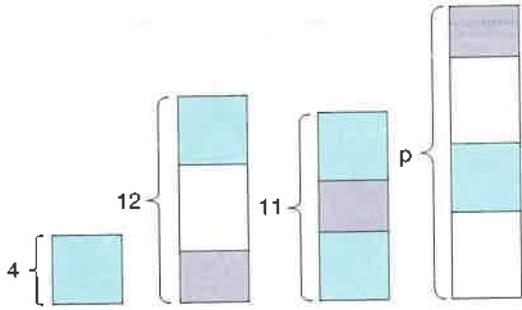
E) 

5. 

A)  B) 
 C)  D) 
 E) 



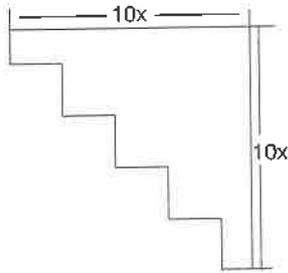
1.



$p = ?$

- A) 13 B) 14 C) 15 D) 16 E) 17

2.

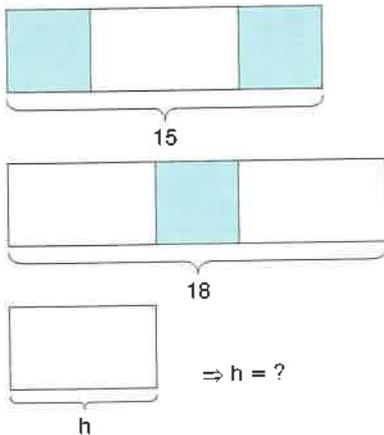


Yukarıdaki şeklin çevresi kaç x ' dir?

What is the perimeter of the figure above, in unit of x ?

- A) 36 B) 38 C) 40 D) 48 E) 50

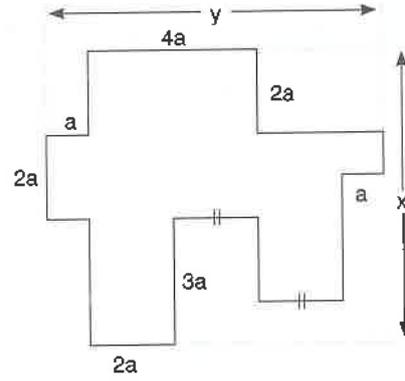
3.



$\Rightarrow h = ?$

- A) 6 B) 7 C) 8 D) 9 E) 11

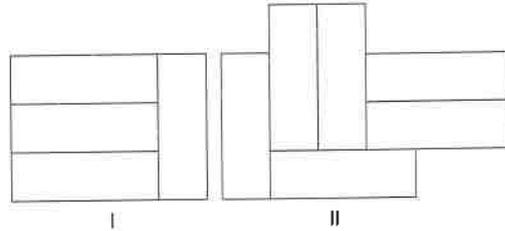
4.



$2x - y = ? a$

- A) 5 B) 6 C) 7 D) 9 E) 10

5.



Çevre (I) = 56 br

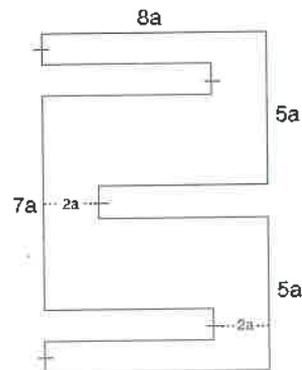
Çevre (II) = ? br

Perimeter (I) = 56 u

Perimeter (II) = ? u

- A) 60 B) 64 C) 72 D) 80 E) 84

6.



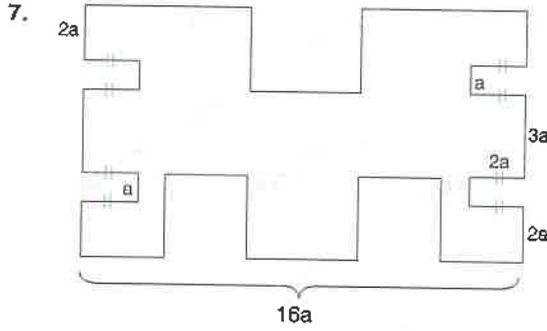
Çevre = ? a

Perimeter = ? a

- A) 70 B) 72 C) 74 D) 76 E) 78

TEST 1

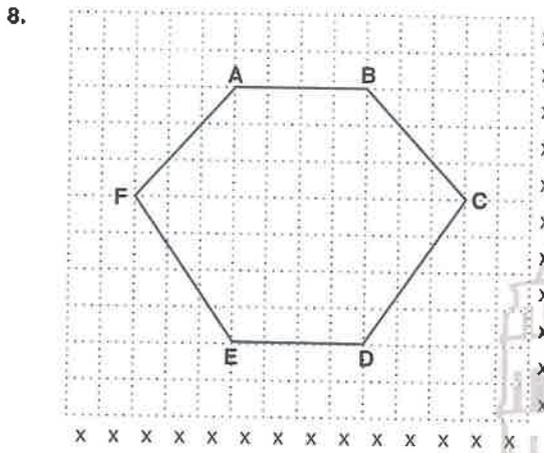
Çevre ve Alan Bulma / Finding Perimeter and Area



Çevre = ? a

Perimeter = ? a

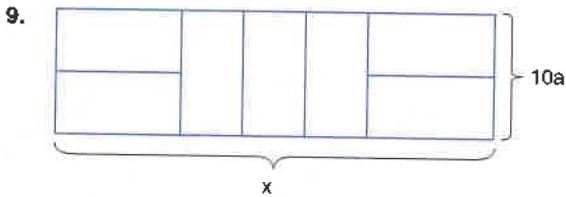
- A) 80 B) 84 C) 85 D) 88 E) 90



Çevre (ABCDEF) = ? x

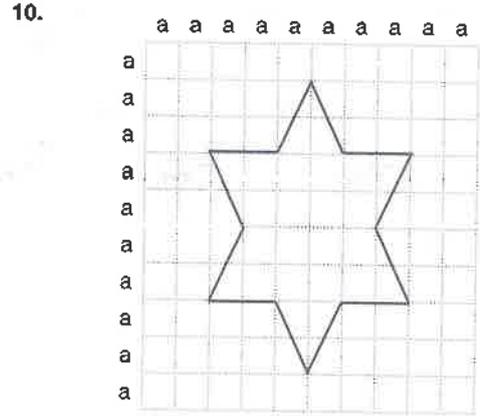
Perimeter (ABCDEF) = ? x

- A) 21 B) $14+6\sqrt{2}$ C) $16+10\sqrt{2}$ D) 24 E) $6(3+\sqrt{2})$



$\Rightarrow x = ? a$

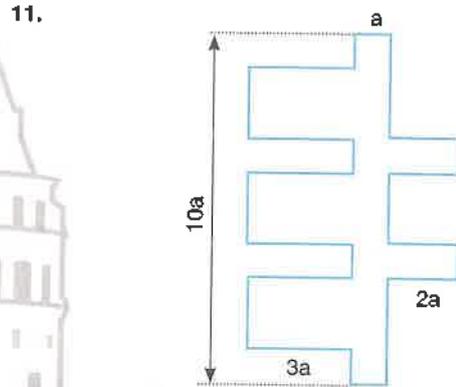
- A) 30 B) 35 C) 40 D) 45 E) 50



Çevre = ? a

Perimeter = ? a

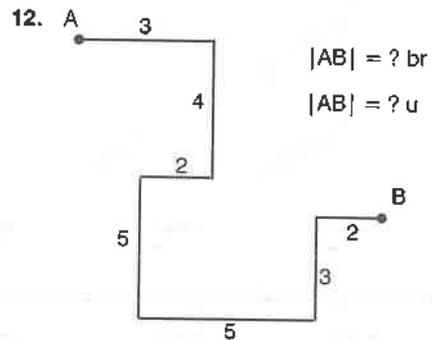
- A) $10+8\sqrt{5}$ B) $15+10\sqrt{5}$ C) $8(1+\sqrt{5})$
D) 25 E) $10(\sqrt{5}+1)$



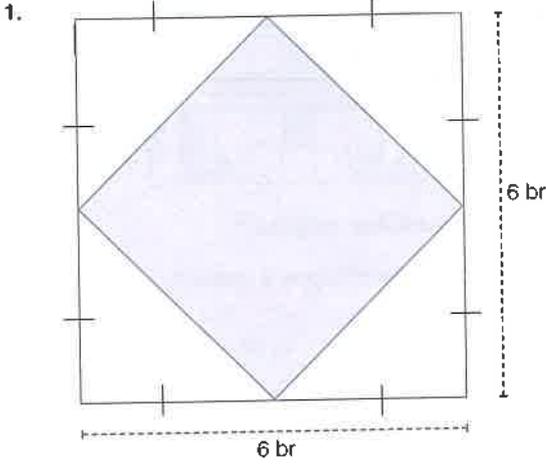
Çevre = ? a

Perimeter = ? a

- A) 42 B) 44 C) 46 D) 48 E) 50



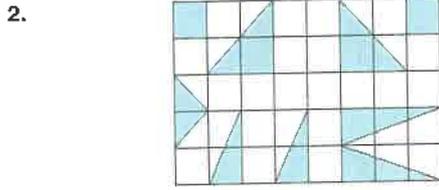
- A) 8 B) 10 C) 12 D) 13 E) 15



Şekildeki taralı alan kaç br^2 'dir?

What is the shaded area of the figure, in u^2 ?

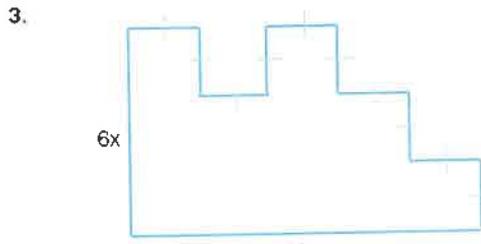
- A) 12 B) 18 C) 20 D) 24 E) 25



Şeklin kaçta kaç taralıdır?

What ratio of the figure is shaded?

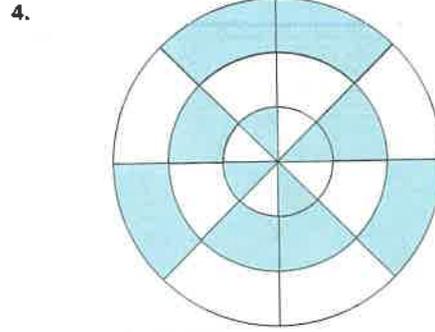
- A) $\frac{1}{8}$ B) $\frac{1}{5}$ C) $\frac{3}{10}$
D) $\frac{3}{8}$ E) $\frac{7}{20}$



Taralı Alan = ? x^2

Shaded Area = ? x^2

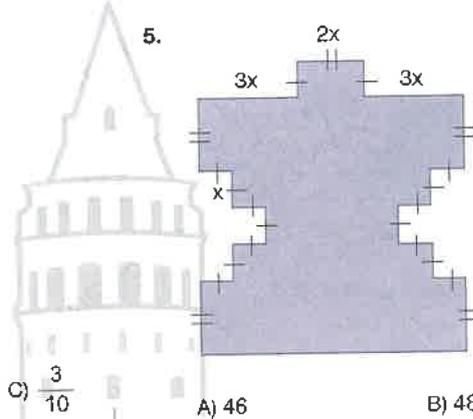
- A) 36 B) 40 C) 44 D) 48 E) 52



$\frac{\text{Taralı Alan}}{\text{Toplam Alan}} = ?$

$\frac{\text{Shaded Area}}{\text{Total Area}} = ?$

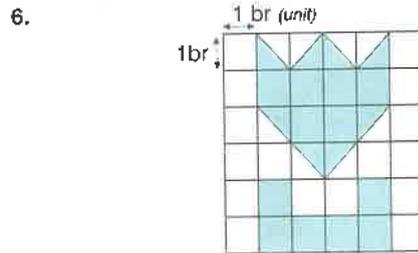
- A) $\frac{1}{4}$ B) $\frac{2}{5}$ C) $\frac{1}{3}$
D) $\frac{1}{2}$ E) $\frac{2}{3}$



Taralı Alan = ? x^2

Shaded Area = ? x^2

- A) 46 B) 48 C) 50
D) 52 E) 54

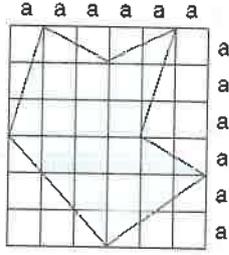


Taralı Alan = ? br^2

Shaded Area = ? u^2

- A) 12 B) 14 C) 16
D) 18 E) 20

7.

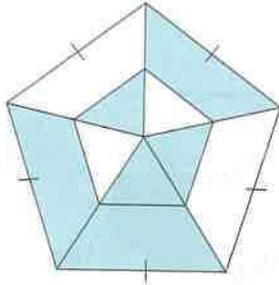


Taralı Alan = ? a^2

Shaded Area = ? a^2

- A) 18 B) 18,5 C) 19
D) 19,5 E) 20

8.

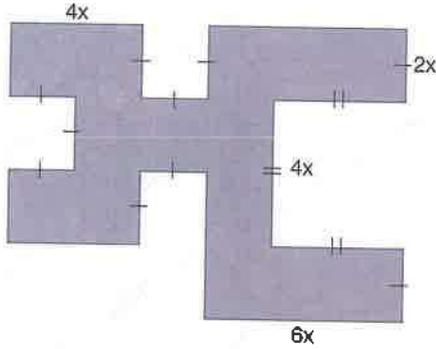


Şeklin yüzde kaç taralıdır ?

What percent of the figure is shaded ?

- A) 40 B) 45 C) 50 D) 55 E) 60

9.

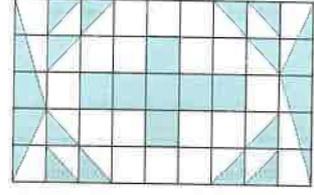


Taralı Alan = ? x^2

Shaded Area = ? x^2

- A) 54 B) 56 C) 58 D) 60 E) 64

10.

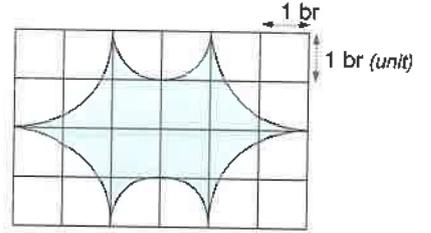


Şeklin yüzde kaç gölgelidir?

What percent of the figure is shaded?

- A) 20 B) 25 C) 30 D) 40 E) 50

11.



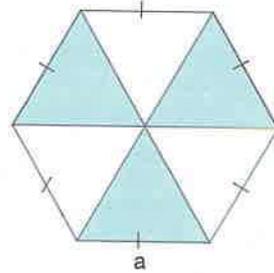
($\pi = 3$)

Taralı Alan = ? br^2

Shaded Area = ? u^2

- A) 6 B) 8 C) 9 D) 10 E) 12

12.



Taralı Alan = ? a^2

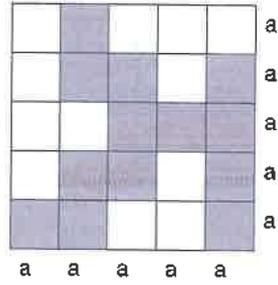
Shaded Area = ? a^2

- A) $\frac{\sqrt{3}}{4}$ B) $\frac{\sqrt{3}}{2}$ C) $\frac{3\sqrt{3}}{4}$
D) $\sqrt{3}$ E) $\frac{9\sqrt{3}}{4}$

TEST 3

Çevre ve Alan Bulma / Finding Perimeter and Area

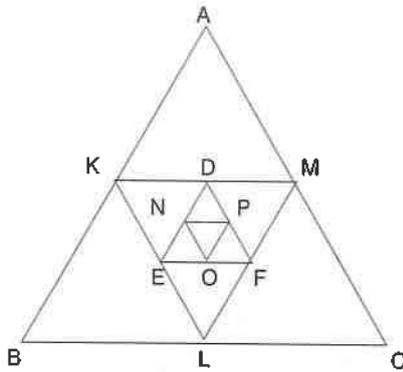
7.



Çevre = ? a

Perimeter = ? a

- A) 25 B) 26 C) 27 D) 28 E) 30



Yukarıdaki şekilde eşkenar üçgenler gösterilmiştir. Her üçgenin kenarlarının orta noktaları alınarak sıradaki üçgen oluşturuluyor.

Bu özelliğe göre, 8. ve 9. soruları cevaplayınız.

Equilateral triangles are shown in the figure above. The next triangle is formed by taking the midpoints of the sides of each triangle.

Accordingly, answer questions 8 and 9.

8. ABC üçgeninin bir kenar uzunluğu 48cm ise 5. olarak oluşan üçgenin çevresi kaç cm'dir?

If the length of one side of triangle ABC is 48 cm, what is the perimeter of the 5th triangle formed?

- A) 6 B) 8 C) 9 D) 12 E) 18

7 - D

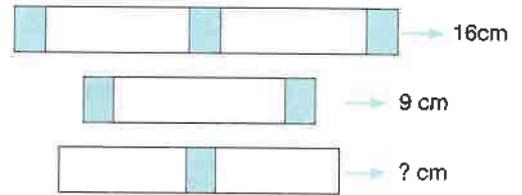
8 - C

9. ABC üçgeninin çevresi 192cm ise 6. olarak oluşan üçgenin alanı kaç cm^2 dir?

If the perimeter of triangle ABC is 192 cm, how many cm^2 is the area of the 6th triangle formed?

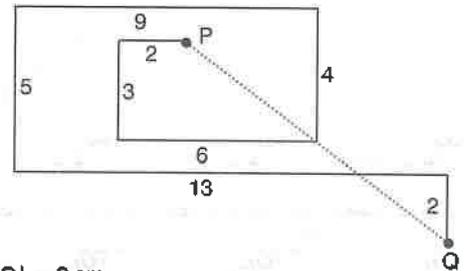
- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) 4 D) 6 E) $3\sqrt{3}$

10.



- A) 6 B) 8 C) 9 D) 12 E) 18

11.



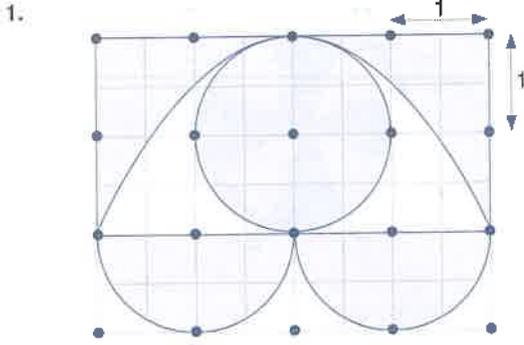
|PQ| = ? cm

- A) 5 B) 7 C) 8 D) 10 E) 15

9 - A

10 - D

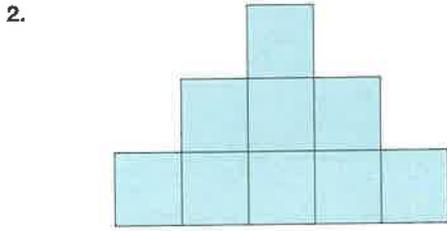
11 - D



Taralı Alan = ? br^2

Shaded Area = ? u^2

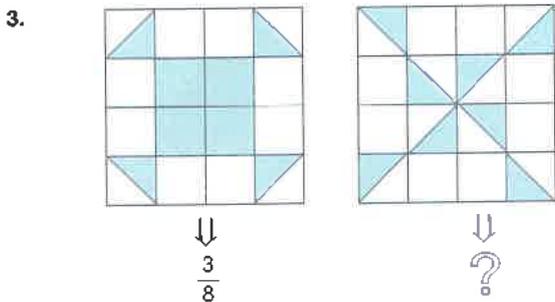
- A) 4π B) $8-\pi$ C) 8
D) $4+2\pi$ E) $4+\pi$



Yukarıdaki şeklin çevresi 48 br olduğuna göre, bu şeklin alanı kaç br^2 dir ?

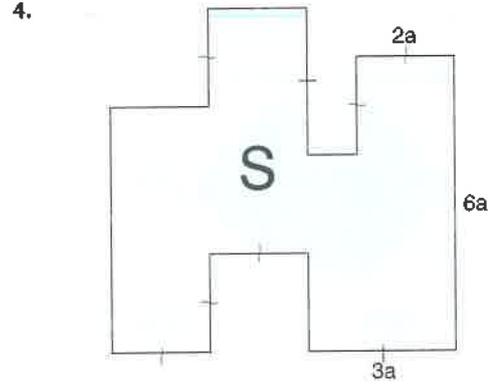
If the perimeter of the figure is 48 u, what is the area of this figure, in u^2 ?

- A) 36 B) 72 C) 81 D) 90 E) 96



- A) $\frac{1}{4}$ B) $\frac{3}{16}$ C) $\frac{1}{8}$
D) $\frac{5}{16}$ E) $\frac{5}{32}$

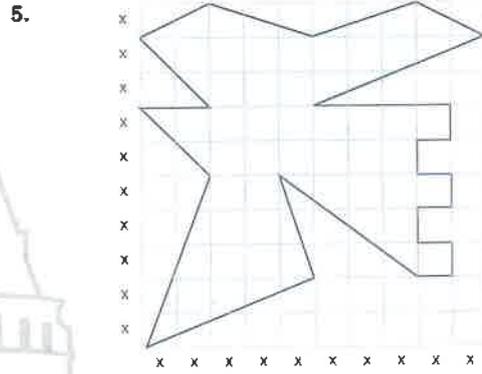
1 - C 2 - C 3 - A



Alan (S) = ? a^2

Area (S) = ? a^2

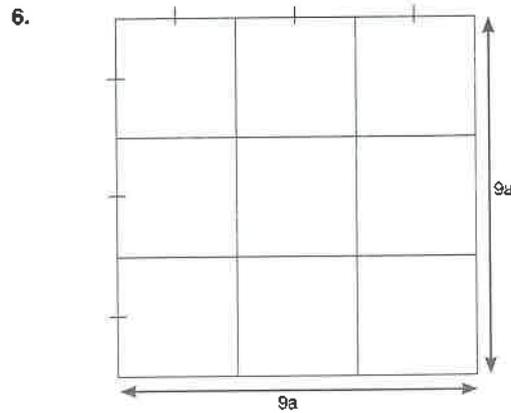
- A) 32 B) 34 C) 36 D) 38 E) 40



Taralı Alan = ? x^2

Shaded Area = ? x^2

- A) 53 B) 53,5 C) 54 D) 54,5 E) 55



Taralı Alan = ? a^2

Shaded Area = ? a^2

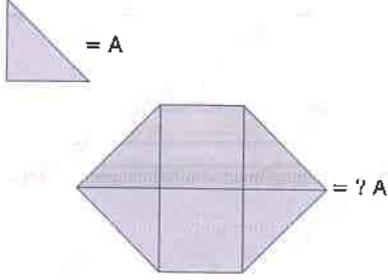
- A) 30 B) 36 C) 45 D) 54 E) 65

4 - C 5 - D 6 - C

TEST 4

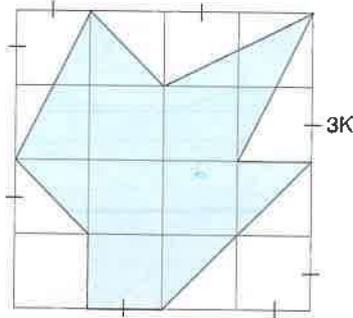
Çevre ve Alan Bulma / Finding Perimeter and Area

7.



- A) 6 B) 7 C) 8 D) 9 E) 10

8.

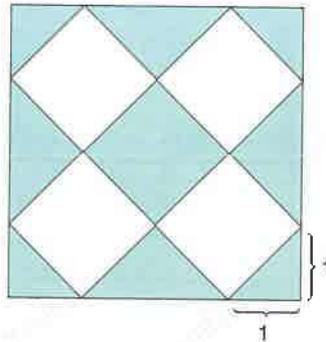


Taralı Alan = ? K^2

Shaded Area = ? K^2

- A) 54 B) 63 C) 72 D) 75

9.

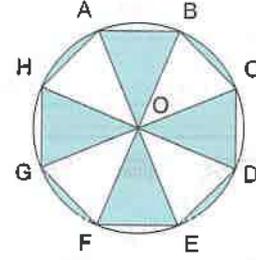


Karenin yüzde kaç boyalıdır?

What percent of the square is shaded?

- A) 30 B) 36 C) 40 D) 45 E) 50

10.



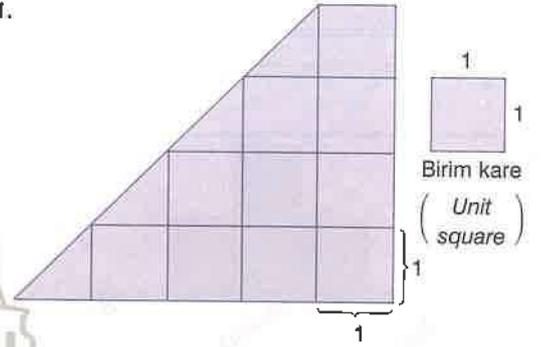
O : Merkez / O : center

$|AE| = 6\sqrt{2} \text{ br } (u)$

Taralı Alan = ? br^2 / Shaded Area = ? u^2

- A) 6π B) 8π C) 9π D) 12π E) 16π

11.

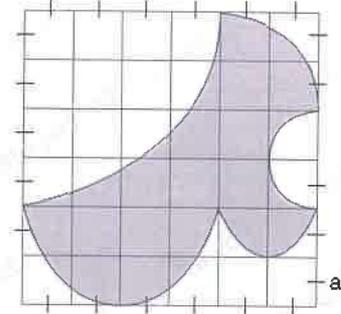


Yukarıdaki şekli kaplamak için kaç birim kare kullanılmıştır?

How many unit squares are used to cover the figure above?

- A) 9 B) 10 C) 12 D) 14 E) 15

12.

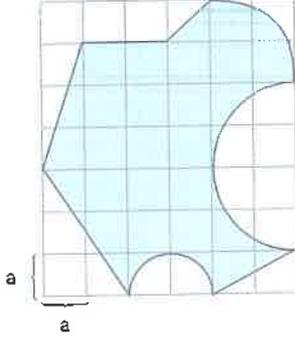


Taralı Alan = ? a^2

Shaded Area = ? a^2

- A) 18 B) $20-\pi$ C) 6π D) $24-2\pi$ E) $16+\pi$

1.

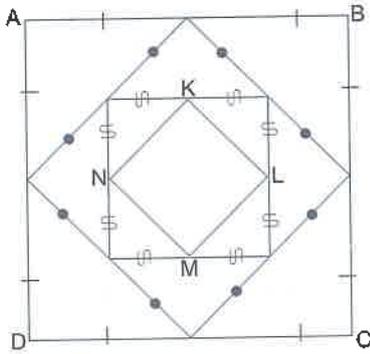


Taralı Alan = ? a^2

Shaded Area = ? a^2

- A) $24 + \frac{5\pi}{2}$ B) 5π C) $27 - \frac{3\pi}{2}$
D) $29 - \frac{3\pi}{2}$ E) 25

2.



ABCD ve KLMN karedir.

ABCD and KLMN are squares.

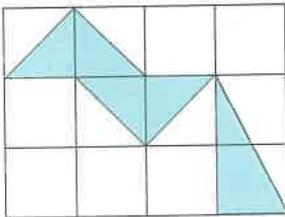
$|AB| = 16$ cm

Çevre (KLMN) = ? cm

Perimeter (KLMN) = ? cm

- A) 8 B) $8\sqrt{2}$ C) 16 D) $16\sqrt{2}$ E) 32

3.

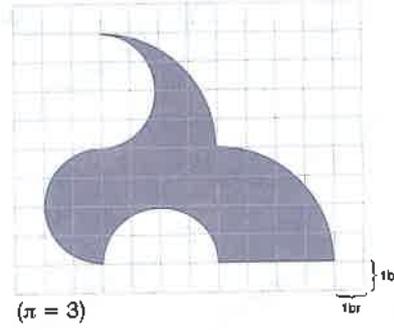


Şeklin yüzde kaçı boyalıdır ?

What percent of the figure is shaded ?

- A) 15 B) 20 C) 25 D) 30 E) 35

4.

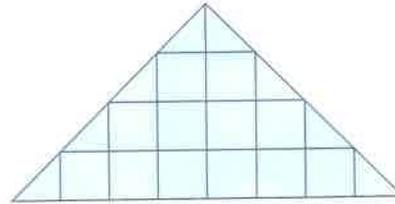


Çevre = ? br

Perimeter = ? u

- A) 32 B) 34 C) 36 D) 38 E) 40

5.



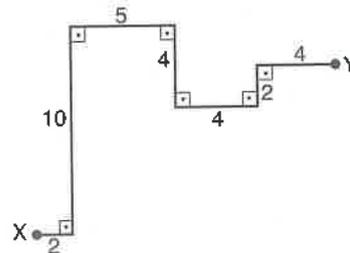
⇒ birim kare (unit square)

Yukarıdaki şekli kaplamak için kaç birim kare kullanılmıştır?

How many unit squares are used to cover the figure above?

- A) 12 B) 14 C) 16 D) 18 E) 20

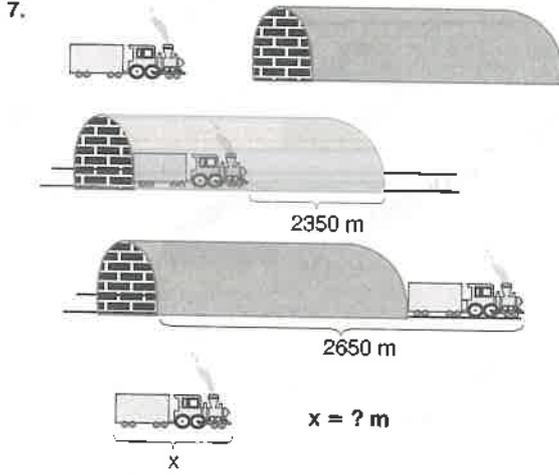
6.



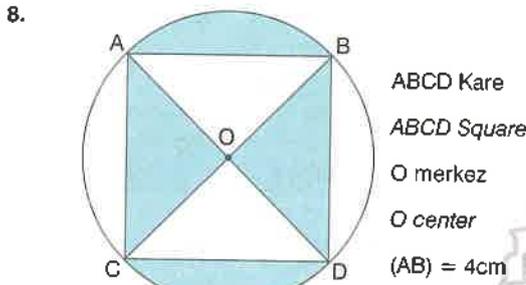
X ile Y arasındaki en kısa uzaklık kaç br^2 'dir?

What is the shortest distance between X and Y, in u^2 ?

- A) 7 B) 10 C) 13 D) 15 E) 17



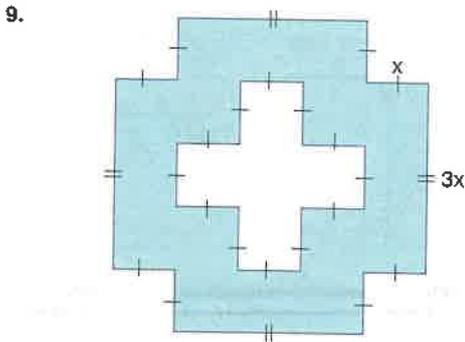
- A) 100 B) 150 C) 200 D) 250 E) 300



Taralı Alan = ? cm^2

Shaded Area = ? cm^2

- A) 2π B) 12 C) $8+2\pi$ D) 4π E) $8\pi-8$



Çevre = ? x

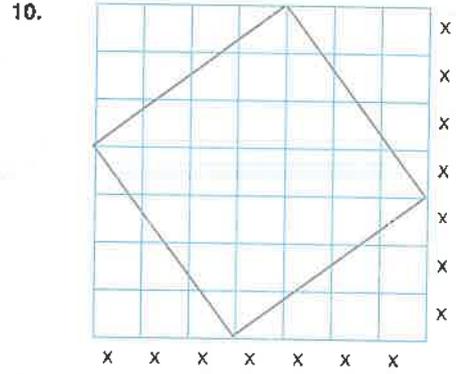
Perimeter = ? x

- A) 28 B) 32 C) 36 D) 40 E) 44

7 - D

8 - D

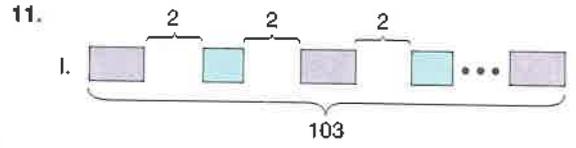
9 - B



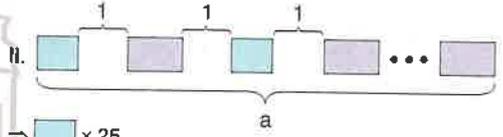
Taralı Alan = ? x^2

Shaded Area = ? x^2

- A) 20. B) 21 C) 24 D) 25 E) 28



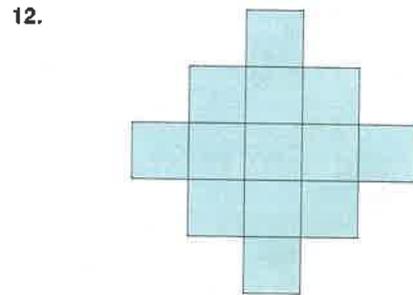
\Rightarrow $\frac{2}{4} \times 10$ $\frac{2}{3} \times 9$



\Rightarrow $\frac{1}{25} \times 25$

a = ?

- A) 221 B) 222 C) 223 D) 224 E) 225



Yukarıdaki şeklin alanı 52 br^2 dir. Buna göre, şeklin çevresi kaç br dir?

The area of the figure is 52 u^2 . Accordingly, what is the perimeter of the figure, in u?

- A) 36 B) 40 C) 44 D) 48 E) 50

10 - D

11 - D

12 - B

1.
$$\begin{array}{r} \text{GALA} \\ + \text{TA} \\ \hline 4938 \end{array} \Rightarrow G + L + T + A = ?$$

- A) 12 B) 13 C) 14 D) 15 E) 16

2.
$$\begin{array}{r} \text{AB8} \\ + \text{7C} \\ \hline \text{B32} \end{array} \Rightarrow A - B + C = ?$$

- A) 3 B) 4 C) 5 D) 6 E) 7

3.
$$\begin{array}{r} \text{KLM} \\ + \text{KL} \\ + \text{K} \\ \hline 522 \end{array} \Rightarrow \frac{L + M}{K} = ?$$

- A) 1 B) 2 C) 3 D) 4

4.
$$\begin{array}{r} \text{AAB} \\ + \text{BBC} \\ + \text{CCA} \\ \hline 2997 \end{array} \Rightarrow A^2 + B - C^2 = ?$$

- A) 27 B) 16 C) 12 D) 9 E) 7

5.
$$\begin{array}{r} \text{KK7} \\ + \text{35K} \\ \hline \text{LM1} \end{array} \Rightarrow K + L + M = ?$$

- A) 12 B) 13 C) 14 D) 15 E) 16

6.
$$\left. \begin{array}{l} aa + bb = 99 \\ aa = bb + 55 \end{array} \right\} \Rightarrow a \cdot b = ?$$

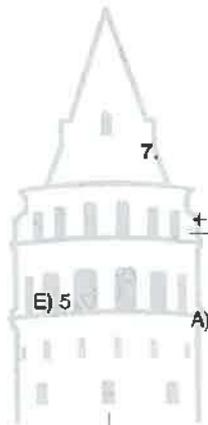
- A) 20 B) 18 C) 14 D) 9 E) 6

7.
$$\begin{array}{r} \text{GA} \\ + \text{LA} \\ + \text{TA} \\ \hline 132 \end{array} \Rightarrow \frac{G + L + T}{A} = ?$$

- A) 1 B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$ E) 3

8.
$$\begin{array}{r} \text{XY75} \\ + \text{24ZT} \\ \hline 6867 \end{array} \Rightarrow X \cdot Y + Z \cdot T = ?$$

- A) 28 B) 30 C) 42 D) 54 E) 63



9.
$$\begin{array}{r} A \\ A \\ A \\ + \quad B \\ \hline \end{array} + \begin{array}{r} AB \\ BA \\ + \quad CDE \\ \hline \end{array} \Rightarrow C + D + E = ?$$

A) 4 B) 6 C) 8 D) 9 E) 14

10.
$$\begin{array}{r} X84X \\ + 4YY2 \\ \hline 8395 \end{array} \Rightarrow X + Y^2 = ?$$

A) 17 B) 20 C) 28 D) 32 E) 35

11.
$$\begin{array}{r} KLM \\ + \quad KL \\ \hline 137 \end{array} \Rightarrow K \cdot L \cdot M = ?$$

A) 10 B) 12 C) 16 D) 20

12. $AAA - BB = 733$
 $\Rightarrow A \cdot B = ?$

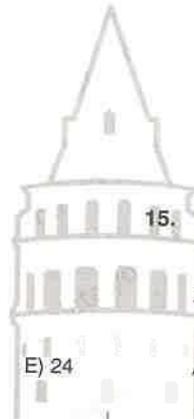
A) 24 B) 28 C) 30 D) 35 E) 42

13.
$$\begin{array}{r} 2KK \\ + \quad LLM \\ \hline 579 \end{array} \Rightarrow K + L + M = ?$$

A) 10 B) 11 C) 12 D) 13 E) 14

14.
$$\begin{array}{r} AB \\ + \quad BA \\ + \quad AB \\ \hline 171 \end{array} \Rightarrow 2 \cdot A - B^2 = ?$$

A) 7 B) 8 C) 10 D) 12 E) 15



15.
$$\begin{array}{r} ABC \\ + \quad BC \\ + \quad C \\ \hline 5AA \end{array} \Rightarrow \begin{array}{l} A \neq B \neq C \\ A + B + C = ? \end{array}$$

A) 12 B) 15 C) 18 D) 21 E) 42

16.
$$\begin{array}{r} XY6 \\ + \quad 6YX \\ \hline AAA \end{array} \Rightarrow X^Y + A = ?$$

A) 24 B) 27 C) 32 D) 34 E) 36

1.
$$\begin{array}{r} \text{KL5} \\ \text{ML} \\ \hline 888 \end{array} \Rightarrow K - L + M = ?$$

- A) 9 B) 10 C) 12 D) 13 E) 14

2.
$$\begin{array}{r} 552 \\ \text{AB} \\ \hline 4\text{AB} \end{array} \Rightarrow A - B = ?$$

- A) 0 B) 1 C) 2 D) 3 E) 4

5.
$$\begin{array}{r} \text{AB9} \\ \text{CCC} \\ \hline \text{CA5} \end{array} \Rightarrow A + B \cdot C = ?$$

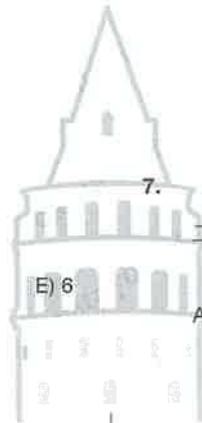
- A) 16 B) 18 C) 21 D) 27 E) 32

6.
$$\begin{array}{r} \text{XY} \\ \text{YX} \\ \hline 72 \end{array} \Rightarrow X^2 - Y^2 = ?$$

- A) 68 B) 72 C) 76 D) 80 E) 84

3. $xx3 - y5y = 236$
 $\Rightarrow \sqrt{x + y} = ?$

- A) 2 B) 3 C) 4 D) 5



7.
$$\begin{array}{r} 9\text{KL9} \\ \text{KL3L} \\ \hline \text{MMM4} \end{array} \Rightarrow \frac{K + L}{M} = ?$$

- A) 2 B) $\frac{5}{2}$ C) 3 D) $\frac{9}{2}$ E) 6

4.
$$\begin{array}{r} \text{ABC} \\ \text{AB} \\ \hline 584 \end{array} \Rightarrow \frac{A \cdot B}{C} = ?$$

- A) $\frac{3}{2}$ B) 2 C) $\frac{5}{2}$ D) 3 E) $\frac{14}{3}$

8.
$$\begin{array}{r} \text{ABC} \\ \text{CBA} \\ \hline \text{KLM} \end{array} \Rightarrow L = ?$$

- A) 5 B) 6 C) 7 D) 8 E) 9

9. $ABAB - BABA = 3636$

$\Rightarrow A - B = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

10.
$$\begin{array}{r} abc \\ ab \\ \hline 160 \end{array} \Rightarrow a + b : c = ?$$

- A) 2 B) 4 C) 5 D) 7 E) 8

11.
$$\begin{array}{r} KLM \\ 3KL \\ \hline 217 \end{array} \Rightarrow K \cdot L \cdot M = ?$$

- A) 84 B) 140 C) 168 D) 175 E) 210

12.
$$\begin{array}{r} 8xy6 \\ 3yx7 \\ \hline x5xz \end{array} \Rightarrow x + y - z = ?$$

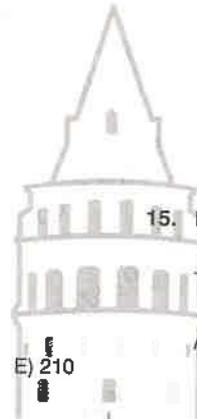
- A) 4 B) 5 C) 7 D) 8 E) 10

13.
$$\begin{array}{r} A27 \\ 9A \\ \hline BBB \end{array} \Rightarrow A \cdot B = ?$$

- A) 8 B) 12 C) 15 D) 18 E) 24

14.
$$\begin{array}{r} XY \\ YX \\ \hline Z3 \end{array} \Rightarrow Z = ?$$

- A) 4 B) 5 C) 6 D) 7 E) 8



15. $R \neq S$
$$\frac{RSR - SRR}{RS - SR} = ?$$

- A) 7 B) 8 C) 9 D) 10 E) 11

16.
$$\begin{array}{r} ABC \\ CB \\ \hline 264 \end{array} \Rightarrow A - B + C = ?$$

- A) 5 B) 6 C) 7 D) 8 E) 9

1.
$$\begin{array}{r} AA \\ AB \\ BA \\ BB \\ + \\ \hline 396 \end{array} \Rightarrow A \cdot B = ?$$

A) 45 B) 54 C) 63 D) 72 E) 81

2.
$$\begin{array}{r} KKK \\ LLL \\ - \\ \hline 555 \end{array} \Rightarrow K - L = ?$$

A) 3 B) 4 C) 5 D) 9 E) 14

3.
$$\begin{array}{r} EF \\ EF \\ EF \\ + \\ \hline 2E1 \end{array} \Rightarrow E + F = ?$$

A) 14 B) 15 C) 16 D) 17 E) 18

4.
$$\begin{array}{r} ABB \\ BBA \\ - \\ \hline 792 \end{array} + \begin{array}{r} AA \\ BB \\ + \\ \hline CDE \end{array} \Rightarrow C + D + E = ?$$

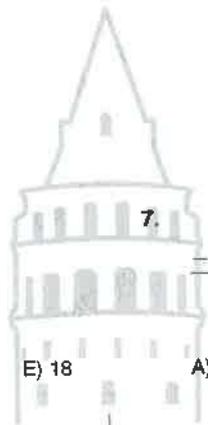
A) 2 B) 3 C) 4 D) 5 E) 6

5.
$$\begin{array}{r} XY \\ YZ \\ - \\ \hline YX \end{array} - \begin{array}{r} X \\ Y \\ - \\ \hline 4 \end{array} \Rightarrow X + Y - Z = ?$$

A) 9 B) 7 C) 6 D) 4 E) 3

6.
$$\begin{array}{r} AB \\ AB \\ AB \\ + \\ \hline CCC \end{array} \Rightarrow \max(A + B + C) = ?$$

A) 11 B) 12 C) 13 D) 14 E) 15



7.
$$\begin{array}{r} \square \square \\ \square \square \\ - \\ \hline 2 \square \end{array} + \begin{array}{r} \square \\ 3 \\ - \\ \hline \square \end{array} \Rightarrow \square \cdot \square = ?$$

A) 18 B) 28 C) 36 D) 48 E) 54

8.
$$\begin{array}{r} \triangle \square \triangle \square \\ \triangle \square \triangle \square \\ + \\ \hline 15352 \end{array} \Rightarrow \square + \triangle + \square = ?$$

A) 16 B) 17 C) 18 D) 19 E) 20

9. $\frac{A}{B} = 3$ $\frac{B}{C} = 2$

$$\begin{array}{r} \text{AB} \\ + \text{BC} \\ \hline \text{DE} \end{array} \Rightarrow D \cdot E = ?$$

- A) 14 B) 18 C) 24 D) 27 E) 36

10. $\begin{array}{r} \text{XYZ} \\ - \text{ZYX} \\ \hline \text{AB4} \end{array} \Rightarrow A = ?$

- A) 9 B) 8 C) 7 D) 6 E) 5

11. $\begin{array}{r} a \\ - b \\ \hline 2 \end{array} \quad \begin{array}{r} b \\ - c \\ \hline 5 \end{array} \quad \begin{array}{r} abc \\ - bbb \\ \hline def \end{array}$

$\Rightarrow d + e + f = ?$

- A) 11 B) 12 C) 13 D) 14

12. $KLM7 - KLM = 2896$

$KK + LL + MM = ?$

- A) 66 B) 88 C) 99 D) 132 E) 176

13. $\begin{array}{r} \star \heartsuit \star \\ + \heartsuit \star \heartsuit \\ \hline 1665 \end{array} \Rightarrow \max(\heartsuit \cdot \star) = ?$

- A) 48 B) 49 C) 54 D) 56 E) 63

14. $\begin{array}{r} abcd \\ + bcd \\ + cd \\ + d \\ \hline 1748 \end{array} \Rightarrow a \cdot d = ?$

- A) 7 B) 12 C) 14 D) 18 E) 28

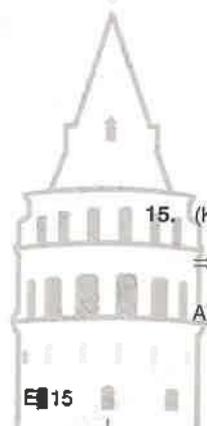
15. $(KK - LL) \cdot (KK + LL) = 297$

$\Rightarrow KL + LK = ?$

- A) 22 B) 33 C) 44 D) 55 E) 66

16. $\begin{array}{r} AA \\ + B \\ \hline BC \end{array} + \begin{array}{r} A \\ + C \\ \hline B \end{array} \Rightarrow A \cdot B \cdot C = ?$

- A) 16 B) 30 C) 48 D) 56 E) 70



1.
$$\begin{array}{r} xy \\ zt \\ + \\ xy \\ zt \\ \hline 18 \quad 68 \end{array} \Rightarrow x^y + z^t = ?$$

- A) 95 B) 96 C) 97 D) 98 E) 99

2.
$$\begin{array}{r} aab \\ bba \\ + \\ 1998 \end{array} = \begin{array}{r} aaa \\ bb \\ cde \end{array} \Rightarrow c + d + e = ?$$

- A) 9 B) 10 C) 11 D) 12 E) 13

3.
$$\begin{array}{r} NN \\ OO \\ - \\ 77 \end{array} = \begin{array}{r} NO \\ ON \\ - \\ PL \end{array} \Rightarrow P + L = ?$$

- A) 7 B) 8 C) 9 D) 10 E) 11

4.
$$\begin{array}{r} ABCD \\ BCD \\ CD \\ D \\ + \\ \hline 7064 \end{array} \Rightarrow \begin{array}{l} A + B = C + D \\ A + B + C + D = ? \end{array}$$

- A) 12 B) 14 C) 24 D) 28 E) 30

5.
$$\begin{array}{r} ABC \\ BA \\ + \\ 551 \end{array} = \begin{array}{r} CBA \\ DE \\ - \\ 528 \end{array} \Rightarrow A + E = ?$$

- A) 11 B) 12 C) 13 D) 14 E) 15

6.
$$\left. \begin{array}{l} (KL)^2 = (LK)^2 + 7128 \\ (KL) + (LK) = 132 \end{array} \right\} \Rightarrow K \cdot L = ?$$

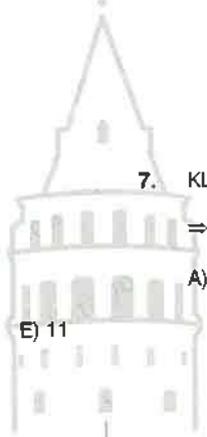
- A) 18 B) 24 C) 27 D) 32 E) 36

7.
$$\begin{array}{l} KL5 = X \\ \Rightarrow KL65 = ? \end{array}$$

- A) $X + 650$ B) $10X - 6$ C) $13X$
D) $5X + 60$ E) $10X + 15$

8.
$$\begin{array}{r} EEF \\ FEE \\ - \\ FE5 \end{array} + \begin{array}{r} EF \\ FE \\ + \\ 143 \end{array} \Rightarrow E \cdot F = ?$$

- A) 32 B) 36 C) 40 D) 42 E) 54



9.
$$\begin{array}{r} \star\star \\ \bullet\bullet \\ \hline 88 \end{array} + \begin{array}{r} \bullet\star\bullet \\ \bullet\star \\ \hline \triangle\star\blacksquare \end{array} \Rightarrow \triangle + \star - \blacksquare = ?$$

A) 3 B) 4 C) 5 D) 6 E) 7

10.
$$\left. \begin{array}{l} \frac{G}{L+T} = \frac{1}{2} \\ \frac{L}{T+G} = \frac{1}{5} \end{array} \right\} \Rightarrow \frac{T}{G+L} = ?$$

A) $\frac{1}{4}$ B) $\frac{1}{3}$ C) $\frac{1}{2}$ D) 1 E) 2

11.
$$\begin{array}{r} A54 \\ 1B5 \\ 54C \\ \hline 1338 \end{array} \Rightarrow \frac{A}{B} + C = ?$$

A) 10 B) 11 C) 12 D) 13

12.
$$\begin{array}{r} UV6 \\ WUV \\ \hline WWW \end{array} \quad \begin{array}{l} W < U < V \\ \Rightarrow U + V + W = ? \end{array}$$

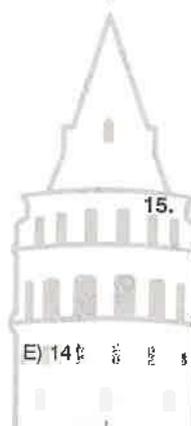
A) 12 B) 15 C) 16 D) 18 E) 21

13.
$$\begin{array}{r} KKK \\ LL \\ \hline 123 \end{array} + \begin{array}{r} KLKL \\ KLK \\ \hline MPNO \end{array} \Rightarrow M.P.N.O = ?$$

A) 12 B) 18 C) 24 D) 30 E) 48

14.
$$\begin{array}{r} ABC \\ CBA \\ ACB \\ \hline 99A \end{array} \Rightarrow A^C + B = ?$$

A) 17 B) 16 C) 15 D) 14 E) 13



15.
$$\left. \begin{array}{l} KL = MN - 5 \\ LK = MN + 13 \end{array} \right\} \Rightarrow \max(MN) = ?$$

A) 68 B) 79 C) 84 D) 93 E) 97

16.
$$\frac{H00H + N00N}{HN + NH} = ?$$

A) 33 B) 49 C) 77 D) 81 E) 91

1.
$$\begin{array}{r} \text{AB} \\ \text{AB} \\ \times \\ \hline \dots \\ \dots \\ + \\ \hline 324 \end{array} \Rightarrow A^2 + B^2 = ?$$

- A) 25 B) 40 C) 65 D) 100 E) 169

2.
$$\begin{array}{r} \text{xx} \\ \text{yy} \\ \times \\ \hline \dots \\ \dots \\ + \\ \hline 2541 \end{array} \Rightarrow x + y = ?$$

- A) 9 B) 10 C) 12 D) 15 E) 16

3.
$$\begin{array}{r} \text{ab} \\ 57 \\ \times \\ \hline \dots \\ \dots \\ + \text{cde} \\ \hline 1425 \end{array} \Rightarrow c \cdot d \cdot e = ?$$

- A) 10 B) 18 C) 20 D) 35

4.
$$\begin{array}{r} \text{KL} \\ \text{LK} \\ \times \\ \hline \dots \\ \dots \\ + \\ \hline 1855 \end{array} \Rightarrow K + L = ?$$

- A) 11 B) 10 C) 9 D) 8 E) 7

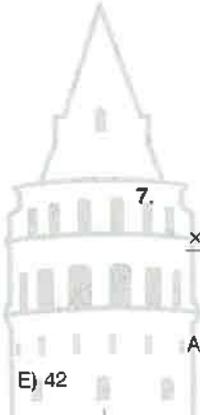
5.
$$\begin{array}{r} \text{xy} \\ z \\ \times \\ \hline 136 \end{array} \quad \begin{array}{r} \text{xy} \\ t \\ \times \\ \hline 153 \end{array} \quad \begin{array}{r} \text{xy} \\ tz \\ \times \\ \hline \text{abbb} \end{array}$$

$\Rightarrow a^b + b^a = ?$

- A) 4 B) 7 C) 9 D) 17 E) 32

6.
$$\begin{array}{r} \text{ab} \\ c \\ \times \\ \hline 72 \end{array} \quad \begin{array}{r} \text{ab} \\ d \\ \times \\ \hline 54 \end{array} \quad \begin{array}{r} \text{cd} \\ \text{ab} \\ \times \\ \hline ? \end{array}$$

- A) 534 B) 612 C) 774 D) 816 E) 936



7.
$$\begin{array}{r} \text{KL} \\ \text{M} \\ \times \\ \hline 185 \end{array} \quad \begin{array}{r} \text{KM} \\ \text{L} \\ \times \\ \hline ? \end{array}$$

- A) 215 B) 225 C) 235 D) 245 E) 255

E) 42

8.
$$\begin{array}{r} \text{AB} \\ \text{CD} \\ \times \\ \hline 511 \\ \dots 7 \\ + \\ \hline \text{KLMN} \end{array} \Rightarrow K + L + M + N = ?$$

- A) 10 B) 14 C) 16 D) 19 E) 20

9.
$$\begin{array}{r} xy \\ \times \quad zt \\ \hline \dots 1 \\ + \quad 215 \\ \hline abcd \end{array} \Rightarrow x + y + z + t = ?$$

- A) 16 B) 17 C) 18 D) 19 E) 20

10.
$$\begin{array}{r} KLM \\ \times \quad A \\ \hline 856 \end{array} \quad \begin{array}{r} KLM \\ \times \quad B \\ \hline 428 \end{array} \quad \begin{array}{r} KLM \\ \times \quad C \\ \hline 642 \end{array} \quad \begin{array}{r} KLM \\ \times \quad ABC \\ \hline x0y2z \end{array}$$

$\Rightarrow x + y + z = ?$

- A) 14 B) 15 C) 16 D) 17 E) 18

11.
$$\begin{array}{r} ab \\ \times \quad 7 \\ \hline a0b \end{array} \Rightarrow a \cdot b = ?$$

- A) 12 B) 9 C) 8 D) 6

12.
$$\begin{array}{r} 4y \\ \times \quad y \\ \hline xxy \end{array} \Rightarrow x^2 + y = ?$$

- A) 9 B) 10 C) 12 D) 14 E) 15

13.
$$\begin{array}{r} KLM \\ \times \quad 6 \\ \hline \dots \\ + \quad 648 \\ \hline 7776 \end{array} \Rightarrow K \times L \times M = ?$$

- A) 9 B) 12 C) 15 D) 20 E) 28

14. $7 \times AB = PAB$
 $\Rightarrow P = ?$

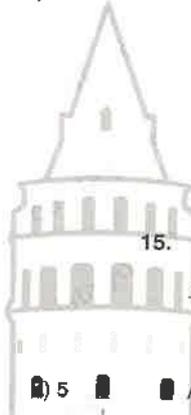
- A) 5 B) 6 C) 7 D) 3 E) 4

15.
$$\begin{array}{r} AA \\ \times \quad A \\ \hline 275 \end{array} \quad \begin{array}{r} AAA \\ \times \quad A \\ \hline BCCD \end{array} \Rightarrow B + C + D = ?$$

- A) 5 B) 12 C) 14 D) 15 E) 16

16.
$$\begin{array}{r} \dots \\ \times \quad 43 \\ \hline \dots \\ + \quad 868 \\ \hline ABBC \end{array} \Rightarrow A \times B \times C = ?$$

- A) 27 B) 36 C) 42 D) 54 E) 56



1. $ABC = 15 \cdot BC$
 $\Rightarrow A - B + C = ?$
 A) 9 B) 7 C) 5 D) 4 E) 2

2.
$$\begin{array}{r} IJ \\ \times 6 \\ \hline 10J \end{array} \Rightarrow I^2 + J^2 = ?$$

 A) 50 B) 61 C) 65 D) 73 E) 85

3.
$$\begin{array}{r} KL \\ \times L \\ \hline 1KL \end{array} \times \begin{array}{r} KL \\ LK \\ \hline ABCC \end{array} \Rightarrow A + B + C = ?$$

 A) 2 B) 4 C) 6 D) 8 E) 9

4.
$$\begin{array}{r} 5B \\ \times B \\ \hline AAB \end{array} \Rightarrow A = ?$$

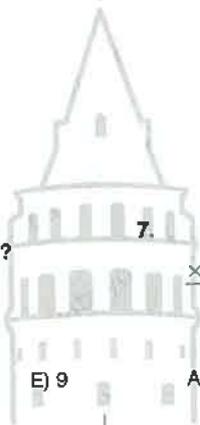
 A) 3 B) 4 C) 5 D) 6 E) 7

5.
$$\begin{array}{r} AB \\ \times B \\ \hline 329 \end{array} \times \begin{array}{r} CD \\ D \\ \hline 261 \end{array} \Rightarrow A + C = ?$$

 A) 5 B) 6 C) 7 D) 8 E) 9

6.
$$\begin{array}{r} KK \\ \times K \\ \hline MK \end{array} \times \begin{array}{r} LL \\ L \\ \hline NL \end{array} \quad K \neq L \Rightarrow M + N = ?$$

 A) 16 B) 15 C) 17 D) 13 E) 12



7.
$$\begin{array}{r} abc \\ \times 7 \\ \hline 3abc \end{array} \Rightarrow a^b + c^2 = ?$$

 A) 12 B) 9 C) 7 D) 4 E) 1

8.
$$\begin{array}{r} MM \\ \times N \\ \hline 165 \end{array} \times \begin{array}{r} NN \\ M \\ \hline KLM \end{array} \Rightarrow N = ?$$

 A) 2 B) 3 C) 4 D) 5 E) 6

9.
$$\begin{array}{r} \text{AA} \\ \times \quad \text{B} \\ \hline 132 \end{array} + \begin{array}{r} \text{AB} \\ \text{BA} \\ \hline 88 \end{array} \Rightarrow A^2 + B^2 = ?$$

A) 25 B) 34 C) 40 D) 56 E) 61

10.
$$\begin{array}{r} \text{KKL} \\ \times \quad \text{LK} \\ \hline \text{MNNC} \\ + \quad \text{1336} \\ \hline \text{*****} \end{array} \Rightarrow M + N + C = ?$$

A) 3 B) 5 C) 7 D) 8 E) 9

11. $x \cdot (abc) = 714$
 $y \cdot (abc) = 204$
 $(xy) \cdot (abc) = ?$

A) 7114 B) 7224 C) 7344 D) 7424

12.
$$\begin{array}{r} \text{K} \\ \times \quad \text{M} \\ \hline 32 \end{array} \times \begin{array}{r} \text{K} \\ \text{L} \\ \hline 24 \end{array} \times \begin{array}{r} \text{KK} \\ \text{LM} \\ \hline \text{ABBA} \end{array}$$

$\Rightarrow A \cdot B = ?$

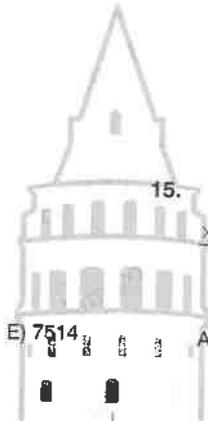
A) 8 B) 12 C) 18 D) 24 E) 32

13.
$$\begin{array}{r} \text{KL} \\ \times \quad 9\text{M} \\ \hline \text{...} \\ + \quad \text{...7} \\ \hline 2208 \end{array} \Rightarrow K \cdot L \cdot M = ?$$

A) 28 B) 32 C) 36 D) 42 E) 48

14.
$$\begin{array}{r} \text{AA} \\ \times \quad 11 \\ \hline \text{A8A} \end{array} \times \begin{array}{r} \text{BB} \\ 11 \\ \hline \text{B6B} \end{array} \times \begin{array}{r} \text{AA} \\ \text{B} \\ \hline ? \end{array}$$

A) 121 B) 132 C) 143 D) 154 E) 165



15.
$$\begin{array}{r} \text{KL} \\ \times \quad 9 \\ \hline \text{K1L} \end{array} \Rightarrow 2 \cdot K - L = ?$$

A) 1 B) 2 C) 4 D) 5 E) 6

16.
$$\begin{array}{r} \text{AB} \\ \times \quad 9\text{A} \\ \hline \text{CCD} \\ + \quad \text{747} \\ \hline \text{AEBD} \end{array} \Rightarrow A \cdot B - C \cdot D + E = ?$$

A) 3 B) 4 C) 5 D) 1 E) 2

1. $\frac{KLKL}{LKLK} = \frac{25}{19} \Rightarrow K + L = ?$

- A) 4 B) 6 C) 8 D) 10 E) 12

2.
$$\begin{array}{r} K03 \\ 4BM \\ \hline 246 \end{array} \Rightarrow (K + B) - M = ?$$

- A) 5 B) 7 C) 9 D) 12 E) 19

3.
$$\begin{array}{r} X84 \\ + YYY \\ \hline 10Z1 \end{array} \Rightarrow X = ?$$

- A) 1 B) 2 C) 3 D) 4

4.
$$\begin{array}{r} KL \\ \times 42 \\ \hline ab \\ + cd \\ \hline 126 \end{array} \quad \begin{array}{r} KL \\ \times 42 \\ \hline M \end{array} \Rightarrow M = ?$$

- A) 942 B) 882 C) 692 D) 672 E) 621

5.
$$\begin{array}{r} abc \\ \times x42 \\ \hline 1\dots \\ 3500 \\ \dots \\ \hline 124250 \end{array} \Rightarrow a + b + c + x = ?$$

- A) 12 B) 15 C) 18 D) 21 E) 24

6.
$$\begin{array}{r} AB \\ - BA \\ \hline 27 \end{array} \Rightarrow A - B = ?$$

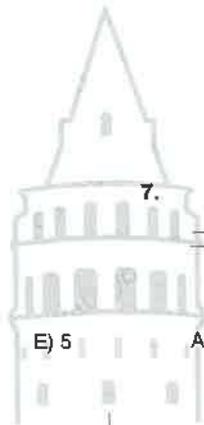
- A) 1 B) 2 C) 3 D) 4 E) 9

7.
$$\begin{array}{r} A42B1 \\ - A41B2 \\ \hline ? \end{array}$$

- A) 100 B) 99 C) 89 D) 80 E) 77

8.
$$\begin{array}{r} AA \\ + 2A \\ \hline 56 \end{array} \Rightarrow A = ?$$

- A) 2 B) 3 C) 4 D) 5 E) 6



9. $\frac{abab}{baba} = \frac{12}{10} \Rightarrow ab = ?$

- A) 65 B) 56 C) 54 D) 45 E) 36

10.
$$\begin{array}{r} 8A3 \\ 115 \\ \hline B5C \end{array} \Rightarrow A + B + C = ?$$

- A) 12 B) 14 C) 16 D) 20 E) 22

11.
$$\begin{array}{r} xxyx \\ + \quad xy \\ \hline 3421 \end{array} \Rightarrow x = ?$$

- A) 3 B) 4 C) 5 D) 7

12.
$$\begin{array}{r} AB \\ \times 2C \\ \hline \dots \\ = 170 \\ 1955 \end{array} \Rightarrow C = ?$$

- A) 2 B) 3 C) 4 D) 5 E) 6

13.
$$\begin{array}{r} KL1M \\ KL3 \\ \hline 4779 \end{array} \Rightarrow K + L + M = ?$$

- A) 10 B) 11 C) 12 D) 13 E) 14

14.
$$\begin{array}{r} KL \\ \times 43 \\ \hline ab \\ + XYZ \\ \hline 884 \end{array} \Rightarrow \begin{array}{r} KL \\ \times 43 \\ \hline ? \end{array}$$

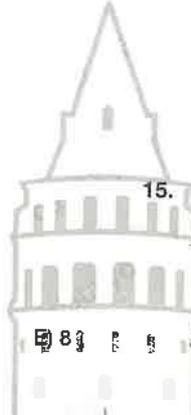
- A) 1116 B) 1032 C) 682 D) 602 E) 559

15.
$$\begin{array}{r} X5Y4 \\ Y1X3 \\ \hline KLMN \end{array} - \begin{array}{r} X32 \\ Y15 \\ \hline 617 \end{array} \Rightarrow K + L + M + N = ?$$

- A) 10 B) 12 C) 14 D) 16 E) 18

16.
$$\begin{array}{r} 2AB \overline{) AB} \\ \underline{\quad} \\ 3 \\ \underline{\quad} \\ 22 \end{array} \Rightarrow A + B = ?$$

- A) 13 B) 14 C) 15 D) 16 E) 17



1.
$$\begin{array}{r} 554 \overline{) KL} \\ \underline{32} \\ KM \end{array} \Rightarrow K + L + M = ?$$

- A) 6 B) 7 C) 8 D) 9 E) 10

5.
$$\begin{array}{r} AB \overline{) B5} \\ \underline{3} \\ 7 \end{array} \Rightarrow A = ?$$

- A) 5 B) 6 C) 7 D) 8 E) 9

2.
$$\begin{array}{r} 87 \overline{) AB} \\ \underline{C} \\ 0 \end{array} \Rightarrow A + \frac{B}{C} = ?$$

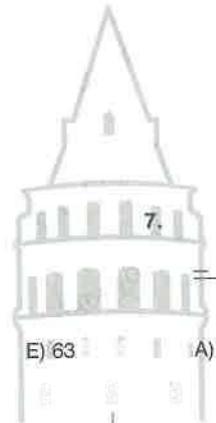
- A) 4 B) 5 C) 6 D) 7 E) 8

6.
$$\begin{array}{r} 4ba \overline{) a6} \\ \underline{13} \\ 5 \end{array} \Rightarrow b = ?$$

- A) 7 B) 8 C) 9 D) 5 E) 6

3.
$$\begin{array}{r} 108 \overline{) KL} \\ \underline{M} \\ 34 \end{array} \Rightarrow K \cdot L \cdot M = ?$$

- A) 28 B) 36 C) 42 D) 54



7.
$$\begin{array}{r} 9KL \overline{) KL} \\ \underline{29} \\ 4 \end{array} \Rightarrow K + L = ?$$

- A) 4 B) 5 C) 6 D) 7 E) 8

4.
$$\begin{array}{r} ABCD \overline{) 52} \\ \underline{47} \\ 24 \end{array} \Rightarrow C \cdot D - A \cdot B = ?$$

- A) 36 B) 40 C) 52 D) 60 E) 74

8.
$$\begin{array}{r} A9B \overline{) AB} \\ \underline{12} \\ 6 \end{array} \Rightarrow A^2 + B^2 = ?$$

- A) 13 B) 18 C) 20 D) 25 E) 34

9.
$$\begin{array}{r} ab5 \\ \underline{\quad} \\ c \end{array} \Bigg| \begin{array}{r} ab \\ \underline{\quad} \\ de \end{array} \Rightarrow c + d + e = ?$$

A) 5 B) 6 C) 7 D) 8 E) 9

10.
$$\begin{array}{r} 72727 \\ \underline{\quad} \\ X \end{array} \Bigg| \begin{array}{r} 72 \\ \underline{\quad} \\ Y \end{array} \Rightarrow X + Y = ?$$

A) 107 B) 1007 C) 1010 D) 1017 E) 1072

11.
$$\begin{array}{r} KLMKLM40 \\ \underline{\quad} \\ A \end{array} \Bigg| \begin{array}{r} KLM \\ \underline{\quad} \\ B \end{array} \Rightarrow B - A = ?$$

A) 100040 B) 100060 C) 100100
D) 100140 E) 100160

12.
$$\begin{array}{r} xy0xy00x \\ \underline{\quad} \\ ? \end{array} \Bigg| \begin{array}{r} xy \\ \underline{\quad} \\ ? \end{array}$$

A) 101000 B) 100100 C) 1001001
D) 1000101 E) 1001000

13.
$$\begin{array}{r} KL \\ \underline{\quad} \\ 5 \end{array} \Bigg| \begin{array}{r} K+L \\ \underline{\quad} \\ 3 \end{array} \Rightarrow K - L = ?$$

A) -5 B) -3 C) 2 D) 3 E) 5

14.
$$\begin{array}{r} A \\ \underline{\quad} \\ 2 \end{array} \Bigg| \begin{array}{r} B \\ \underline{\quad} \\ 4 \end{array} \quad \begin{array}{r} C \\ \underline{\quad} \\ 3 \end{array} \Bigg| \begin{array}{r} 7 \\ \underline{\quad} \\ B \end{array}$$

$$\Rightarrow \frac{A + B + C - 5}{3B} = ?$$

A) 2 B) 3 C) 4 D) 5 E) 6

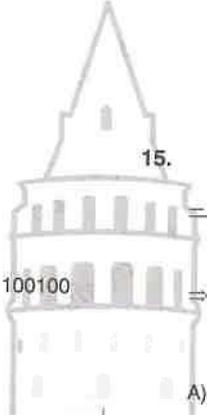
15.
$$\begin{array}{r} x \\ \underline{\quad} \\ 5 \end{array} \Bigg| \begin{array}{r} y \\ \underline{\quad} \\ 2 \end{array} \quad \begin{array}{r} y \\ \underline{\quad} \\ 3 \end{array} \Bigg| \begin{array}{r} z \\ \underline{\quad} \\ 5 \end{array}$$

$$\Rightarrow \frac{2x - 22}{5z} = ?$$

A) 1 B) $\frac{2}{5}$ C) 2 D) $\frac{4}{5}$ E) 4

16.
$$\begin{array}{r} 12K + 8 \\ \underline{\quad} \\ 2 \end{array} \Bigg| \begin{array}{r} 3L \\ \underline{\quad} \\ 2K + 1 \end{array} \Rightarrow L = ?$$

A) 3 B) 4 C) 6 D) 2 E) 8



1.
$$\begin{array}{r} K \overline{) 57} \\ \underline{42} \\ 15 \end{array} \quad \begin{array}{r} K \overline{) 19} \\ \underline{12} \\ 7 \end{array} \Rightarrow M = ?$$

 A) 4 B) 6 C) 8 D) 10 E) 12

5.
$$\begin{array}{r} AB \overline{) 12} \\ \underline{7} \\ 5 \end{array} \Rightarrow A + B = ?$$

 A) 10 B) 11 C) 12 D) 13 E) 14

2.
$$\begin{array}{r} A \overline{) B} \\ \underline{3} \\ 4 \end{array} \quad \begin{array}{r} B \overline{) 8} \\ \underline{3} \\ 5 \end{array} \Rightarrow \begin{array}{r} A \overline{) 24} \\ \underline{12} \\ 12 \end{array} D = ?$$

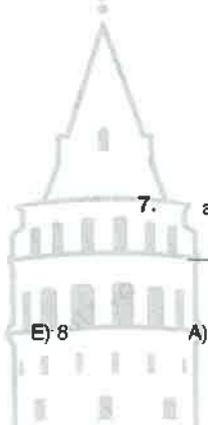
 A) 11 B) 13 C) 15 D) 17 E) 19

6.
$$\begin{array}{r} K \overline{) L} \\ \underline{3} \\ 7 \end{array} \quad \begin{array}{r} L \overline{) M} \\ \underline{6} \\ 2 \end{array} \Rightarrow \min\{K\} = ?$$

 A) 69 B) 67 C) 65 D) 63 E) 61

3.
$$\begin{array}{r} X \overline{) Y} \\ \underline{6} \\ 5 \end{array} \quad \begin{array}{r} Y \overline{) 7} \\ \underline{4} \\ 3 \end{array} \Rightarrow \begin{array}{r} X \overline{) 21} \\ \underline{12} \\ 9 \end{array} K = ?$$

 A) 16 B) 14 C) 12 D) 10 E) 8



7.
$$\begin{array}{r} abab6 \overline{) ab} \\ \underline{x} \\ y \end{array} \Rightarrow x + y = ?$$

 A) 101 B) 104 C) 1010 D) 1016 E) 1011

4.
$$\begin{array}{r} KL9 \overline{) 23} \\ \underline{29} \\ 4 \end{array} \Rightarrow K \cdot L = ?$$

 A) 16 B) 25 C) 36 D) 49 E) 64

8.
$$\begin{array}{r} K \overline{) L} \\ \underline{2} \\ 5 \end{array} \quad \begin{array}{r} L \overline{) M} \\ \underline{3} \\ 7 \end{array} \Rightarrow \frac{K + L + M - 26}{2M} = ?$$

 A) 1 B) 2 C) 3 D) 4 E) 5

9.
$$\frac{3 \cdot K}{2} \left| \begin{array}{l} 8 \\ K-9 \end{array} \right. \Rightarrow K = ?$$

 A) 10 B) 11 C) 12 D) 13 E) 14

10. $A > B, A + B = 407$

$$\frac{A}{1} \left| \begin{array}{l} B \\ 13 \end{array} \right. \Rightarrow B = ?$$

 A) 30 B) 29 C) 28 D) 27 E) 26

11.
$$\frac{135}{L} \left| \begin{array}{l} K^2 \\ K \end{array} \right. \Rightarrow K + L = ?$$

 A) 21 B) 18 C) 15 D) 12

12.
$$\frac{\blacksquare}{5} \left| \begin{array}{l} \blacktriangle + 1 \\ 27 - 2\blacktriangle \end{array} \right. \quad \frac{\blacksquare}{5} \left| \begin{array}{l} 27 - 2\blacktriangle \\ \blacktriangle + 1 \end{array} \right.$$

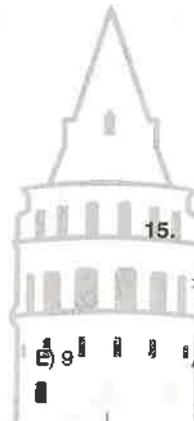
 $\Rightarrow \Sigma(\blacktriangle) = ?$
 A) 31 B) 35 C) 41 D) 45 E) 51

13.
$$\frac{\bullet}{2\star + 1} \left| \begin{array}{l} 3\star - 2 \\ \star + 1 \end{array} \right. \Rightarrow \min\{\bullet\} = ?$$

 A) 57 B) 58 C) 59 D) 60 E) 61

14.
$$\frac{K + 1}{2L - 5} \left| \begin{array}{l} L + 2 \\ 6 \end{array} \right. \Rightarrow \min\{K\} + \max\{K\} = ?$$

 A) 81 B) 82 C) 83 D) 84 E) 85



15.
$$\frac{\otimes \oplus}{2} \left| \begin{array}{l} \oplus \otimes \\ 2 \end{array} \right. \Rightarrow (\otimes) \cdot (\oplus) = ?$$

 A) 5 B) 10 C) 15 D) 20 E) 25

16.
$$\frac{K3L}{10} \left| \begin{array}{l} KL \\ 9 \end{array} \right. \Rightarrow L - K = ?$$

 A) 3 B) 4 C) 5 D) 6 E) 7

1.
$$\begin{array}{r} ABC \\ \times 2K \\ \hline \dots 2 \\ 1024 \\ \hline \dots \end{array} \Rightarrow K = ?$$

- A) 2 B) 3 C) 4 D) 5 E) 6

2.
$$\begin{array}{r} abc \\ bab \\ cca \\ + \\ \hline 999 \end{array} \Rightarrow a + b + c = ?$$

- A) 8 B) 9 C) 10 D) 11 E) 12

3.
$$\begin{array}{r} abc \overline{)12} \\ \underline{5} \\ 7 \end{array} \quad \begin{array}{r} abc8 \overline{)12} \\ \underline{8} \\ 4 \end{array}$$

- A) 2 B) 4 C) 6 D) 8

4.
$$\begin{array}{r} KLM \overline{)KM} \\ \underline{7} \\ 0 \end{array} \Rightarrow K - L + M = ?$$

- A) 5 B) 6 C) 7 D) 8 E) 9

5.
$$\begin{array}{r} KL \\ LL \\ \hline 40 \end{array} \quad \begin{array}{r} KK \\ LL \\ \hline ? \end{array}$$

- A) 22 B) 33 C) 44 D) 55 E) 66

6.
$$\begin{array}{r} AB \\ BB \\ BA \\ + \\ \hline 187 \end{array} \Rightarrow A = ?$$

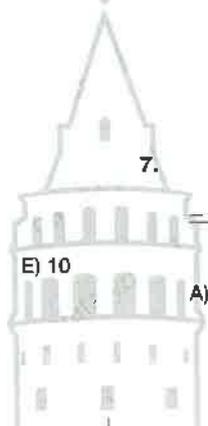
- A) B B) $\frac{11-B}{2}$ C) B + 1
D) 17 - 2B E) $\frac{187-3B}{3}$

7.
$$\begin{array}{r} KL \overline{)K+L} \\ \underline{3} \\ 0 \end{array} \Rightarrow K \cdot L = ?$$

- E) 10 A) 6 B) 8 C) 12 D) 14 E) 27

8.
$$\left. \begin{array}{l} KK + LL = 66 \\ KK = LL + 22 \end{array} \right\} \Rightarrow K^2 + L^2 = ?$$

- A) 16 B) 20 C) 25 D) 32 E) 40



9.
$$\begin{array}{r} X21Y \\ Y12X \\ \hline 4086 \end{array} \Rightarrow \max\{X \cdot Y\} = ?$$

- A) 21 B) 34 C) 45 D) 64 E) 81

10.
$$\begin{array}{r} 34M \\ LK9 \\ + \\ \hline K1K \end{array} \Rightarrow K + L + M = ?$$

- A) 10 B) 13 C) 15 D) 16 E) 19

11.
$$\begin{array}{r} XY5 \\ YX2 \\ - \\ \hline 183 \end{array} \Rightarrow X - Y = ?$$

- A) 1 B) 2 C) 3 D) 4

12.
$$\begin{array}{r} KLM \\ KL \\ + \\ \hline 271 \end{array} \Rightarrow K + L + M = ?$$

- A) 10 B) 11 C) 12 D) 13 E) 14

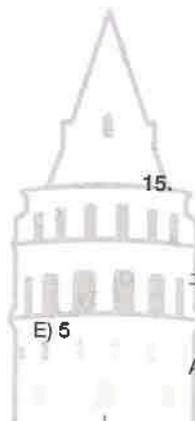
13. $K \neq L \neq M$

$$\begin{array}{r} AB \\ CA \\ BC \\ + \\ \hline KLM \end{array} \Rightarrow A + B + C = ?$$

- A) 7 B) 9 C) 11 D) 21 E) 22

14.
$$\begin{array}{r} XYZT \\ 135 \\ \times \\ \hline \dots\dots 5 \\ \dots\dots 5 \\ \dots\dots 5 \\ + 41 \cdot 5 \\ \hline \dots\dots 25 \end{array} \Rightarrow XYZT = ?$$

- A) 4131 B) 4133 C) 4135 D) 4145 E) 4165



15.
$$\begin{array}{r} ABB \\ 3B \\ \times \\ \hline CCB \\ \dots 5 \\ + \\ \hline ? \end{array}$$

- A) 3346 B) 4126 C) 4416 D) 4425 E) 5425

16.
$$\begin{array}{r} ABC \\ CBA \\ - \\ \hline K \end{array} + \begin{array}{r} AB \\ BA \\ + \\ \hline M \end{array} \quad K = M$$

$\Rightarrow A + B = ?$

- A) 6 B) 7 C) 8 D) 9 E) 10

1. $AB^2 = CAB$
 $\Rightarrow C = ?$
 A) 3 B) 5 C) 6 D) 7 E) 8

2.
$$\begin{array}{r} \text{KLL} \\ \times \text{5M} \\ \hline 1508 \\ + \dots \\ \hline 20358 \end{array} \Rightarrow M = ?$$

 A) 2 B) 3 C) 4 D) 6 E) 7

3.
$$\begin{array}{r} \text{ABAB} \\ + \text{BABA} \\ \hline \text{CDDD3} \end{array} \Rightarrow C \cdot D = ?$$

 A) 12 B) 9 C) 8 D) 6

4.
$$\begin{array}{r} x + 11 \overline{) 18} \\ \underline{y^2 - 8} \end{array} \Rightarrow \max\{x\} = ?$$

 A) 140 B) 150 C) 160 D) 170 E) 180

5.
$$\begin{array}{r} \text{K7M} \\ - \text{39} \\ \hline \text{KKK} \end{array} \Rightarrow K^2 - M^2 = ?$$

 A) 5 B) 8 C) 9 D) 12 E) 16

6.
$$\begin{array}{r} \text{ABC} \overline{) C4} \\ \underline{8} \\ 4 \end{array} \Rightarrow A + B + C = ?$$

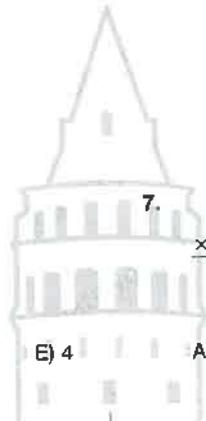
 A) 10 B) 11 C) 12 D) 13 E) 14

7.
$$\begin{array}{r} \text{PQ} \\ \times \text{LPQ} \\ \hline \text{LPQ} \end{array} \Rightarrow L = ?$$

 A) 5 B) 6 C) 7 D) 8 E) 9

8.
$$\begin{array}{r} \text{KLM} \\ + \text{KLL} \\ + \text{KML} \\ \hline 2210 \end{array} \Rightarrow K + 2L + M = ?$$

 A) 15 B) 17 C) 18 D) 20 E) 21



9.
$$\begin{array}{r} A \ 5 \\ \hline B \\ \hline 3 \end{array} \quad \begin{array}{r} B \ 6 \\ \hline C \\ \hline 2 \end{array}$$

$\Rightarrow \frac{A + B + 4C - 15}{5C} = ?$

A) 2 B) 3 C) 4 D) 5 E) 8

10. $A \neq B \neq C \neq D,$

$$\begin{array}{r} AB \\ + BA \\ \hline CC \end{array} \quad \begin{array}{r} C \\ \times C \\ \hline D \end{array} \Rightarrow A \cdot B \cdot C \cdot D = ?$$

A) 48 B) 50 C) 54 D) 60 E) 64

11.
$$\begin{array}{r} 534 \\ LM \\ \hline 4LM \end{array} \Rightarrow L + M = ?$$

A) 11 B) 12 C) 13 D) 14

12.
$$\begin{array}{r} A \\ + AB \\ + ABC \\ \hline 382 \end{array} \Rightarrow A \cdot B \cdot C = ?$$

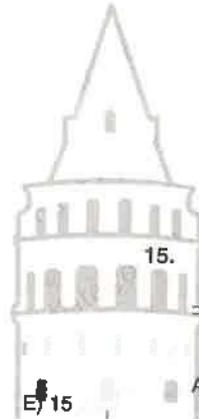
A) 48 B) 54 C) 60 D) 72 E) 84

13.
$$\begin{array}{r} A7B \\ + 7AB \\ \hline CCC \end{array} \quad \begin{array}{r} AB \\ + BC \\ + CA \\ \hline ABD \end{array} \Rightarrow D = ?$$

A) 6 B) 5 C) 4 D) 3 E) 2

14.
$$\begin{array}{r} abc \\ \times d \\ \hline 1792 \end{array} \quad \begin{array}{r} abc \\ \times e \\ \hline 1344 \end{array} \quad \begin{array}{r} abc \\ \times de \\ \hline ? \end{array}$$

A) 17344 B) 18564 C) 18642
D) 19192 E) 19264



15.
$$\begin{array}{r} KL \ 34 \\ \hline 11 \end{array} \quad \begin{array}{r} MN \ 34 \\ \hline 22 \end{array} \quad \begin{array}{r} MNKL \ 34 \\ \hline ? \end{array}$$

A) 1 B) 2 C) 3 D) 11 E) 22

16.
$$\begin{array}{r} ABC \\ + AB \\ \hline 668 \end{array} \Rightarrow A + \frac{B}{C} = ?$$

A) 7 B) 8 C) 9 D) 10 E) 11

1.
$$\begin{array}{r} \text{ABC} \mid \text{AC} \\ \hline \mid 6 \\ \hline 0 \end{array} \quad \begin{array}{r} \text{ACB} \mid 6 \\ \hline \mid \text{DE} \\ \hline 0 \end{array}$$

 $\Rightarrow D^E + E^D = ?$
 A) 2 B) 3 C) 1 D) 5 E) 4

2.
$$\begin{array}{r} ab \\ ba \\ \hline c2 \end{array} + \begin{array}{r} abc \\ bc \\ c \\ \hline def \end{array} \Rightarrow d \cdot e \cdot f = ?$$

 A) 18 B) 24 C) 27 D) 36 E) 48

3.
$$\begin{array}{r} \text{KK} \\ \text{K} \\ \hline 539 \end{array} + \begin{array}{r} \text{KL} \\ \text{LK} \\ \hline 121 \end{array} \Rightarrow L = ?$$

 A) 3 B) 4 C) 5 D) 6

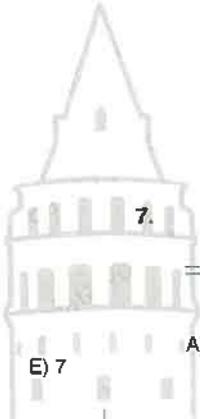
4. $ab = x$
 $\Rightarrow ab5ab = ?$
 A) $1000 \cdot ab + 5$ B) $101 \cdot ab + 50$
 C) $11 \cdot ab + 500$ D) $1001 \cdot ab + 500$
 E) $101 \cdot ab + 5$

5.
$$\begin{array}{r} \text{AB} \\ \text{B} \\ \hline \text{A11} \end{array} \Rightarrow A \cdot B = ?$$

 A) 42 B) 45 C) 48 D) 54 E) 63

6.
$$\begin{array}{r} \text{K7K} \\ \text{K8} \\ \hline 5\text{LL} \end{array} \Rightarrow K + L = ?$$

 A) 5 B) 6 C) 7 D) 8 E) 9



7.
$$\begin{array}{r} abc \mid d \\ \hline \mid 24 \\ \hline 17 \end{array} \quad \begin{array}{r} abc \mid 8 \\ \hline \mid e \\ \hline ? \end{array}$$

 A) 1 B) 2 C) 4 D) 6 E) 7

8.
$$\begin{array}{r} \text{KKK} \\ \text{LL} \\ \hline 36\text{L} \end{array} + \begin{array}{r} \text{KL} \\ \text{LK} \\ \hline \text{ABC} \end{array} \Rightarrow B = ?$$

 A) 5 B) 4 C) 3 D) 2 E) 1



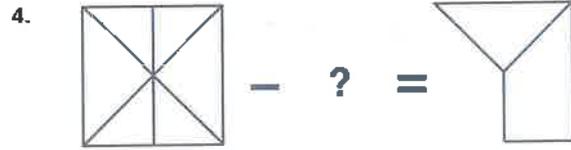
- A)
- B)
- C)
- D)
- E)



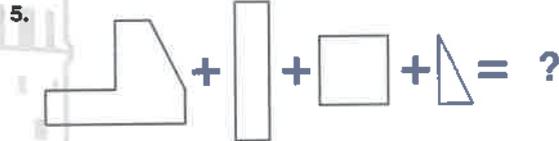
- A)
- B)
- C)
- D)
- E)



- A)
- B)
- C)
- D)
- E)

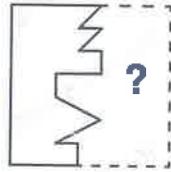


- A)
- B)
- C)
- D)
- E)



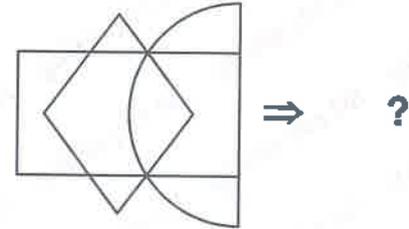
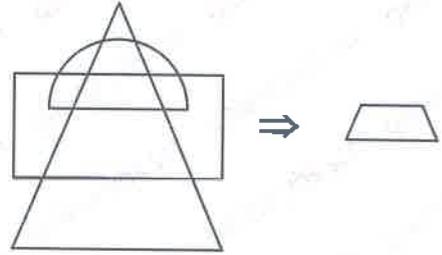
- A)
- B)
- C)
- D)
- E)

6.



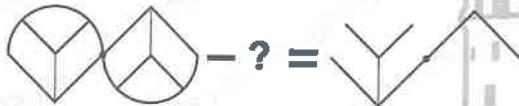
- A)
- B)
- C)
- D)
- E)

8.



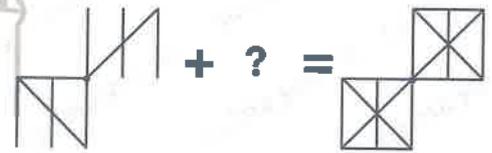
- A)
- B)
- C)
- D)
- E)

7.

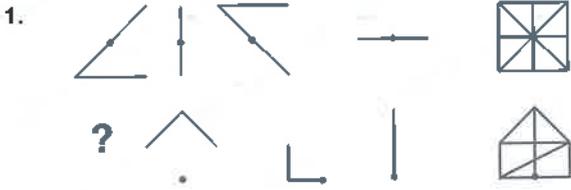


- A)
- B)
- C)
- D)
- E)

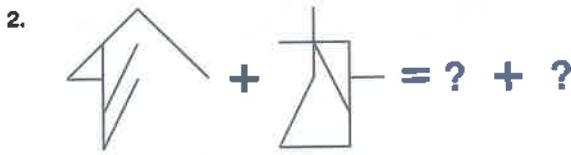
9.



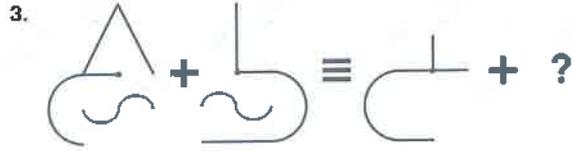
- A)
- B)
- C)
- D)
- E)



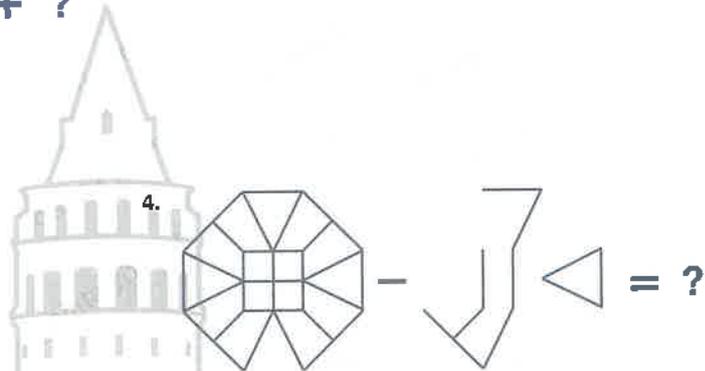
- A) B) C) D) E)



- A) B) C) D) E)



- A) B) C) D) E)



- A) B) C) D) E)

1 - C

2 - E

3 - B

4 - A

5.

A) B) C) D) E)

6.

A) B) C) D) E)

7.

A) B) C) D) E)

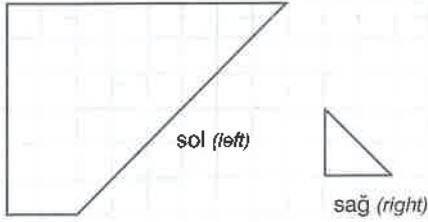
8.

Yukarıdaki şekilleri kullanarak tam bir kare elde edilirse hangi parçaya ihtiyaç yoktur?

If a complete square is obtained using the shapes above, what piece is not needed?

A) B) C) D) E)

1.



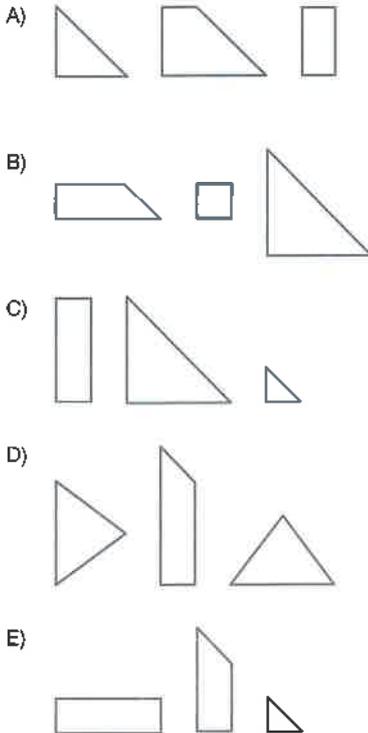
Sağ tarafta verilen üçgenin kaç tanesi ie sol taraftaki şekil kaplanabilir?

How many of the triangle given on the right can be covered with the left shape?

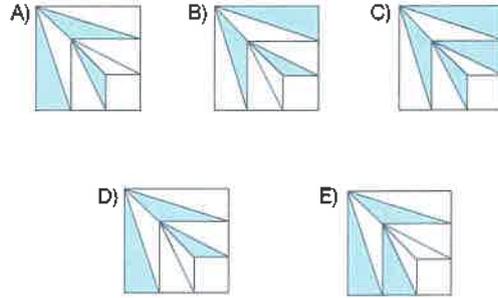
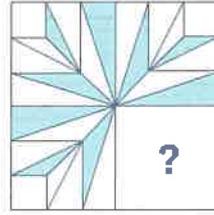
- A) 11 B) 12 C) 13 D) 15 E) 17

2. Hangi seçenekteki parçalar birleştirildiğinde tam bir dik üçgen oluşturmaz?

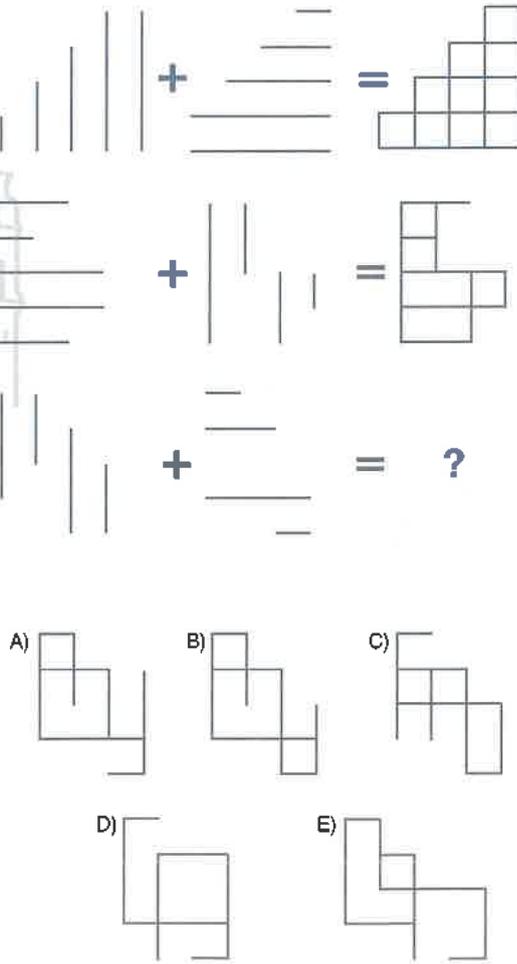
Which option does not make a complete right triangle when pieces are combined?

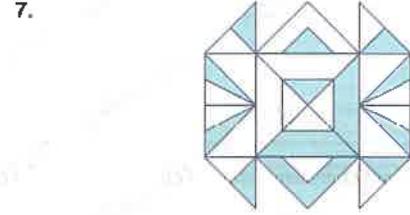
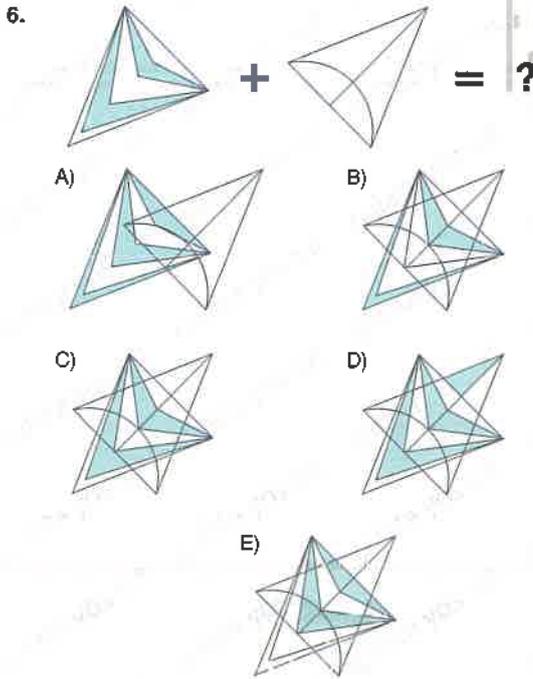
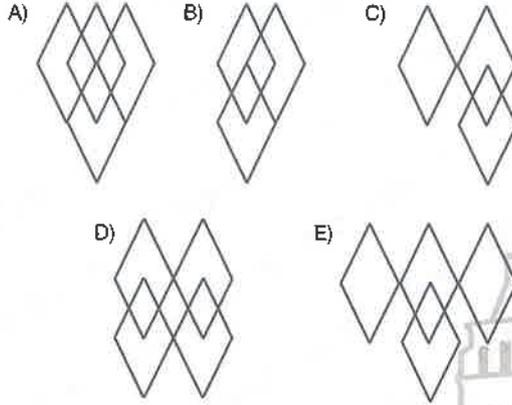
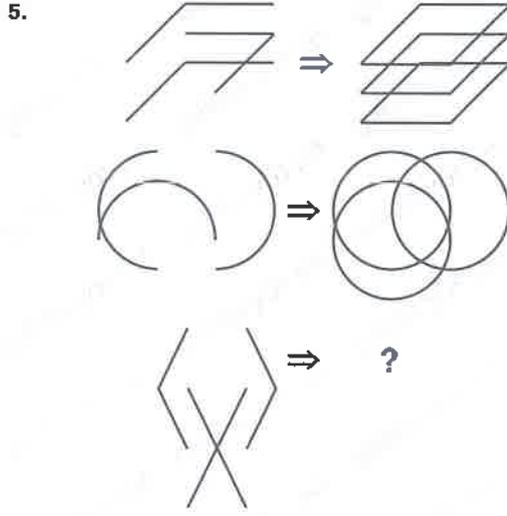


3.

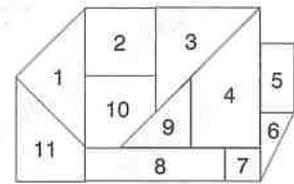
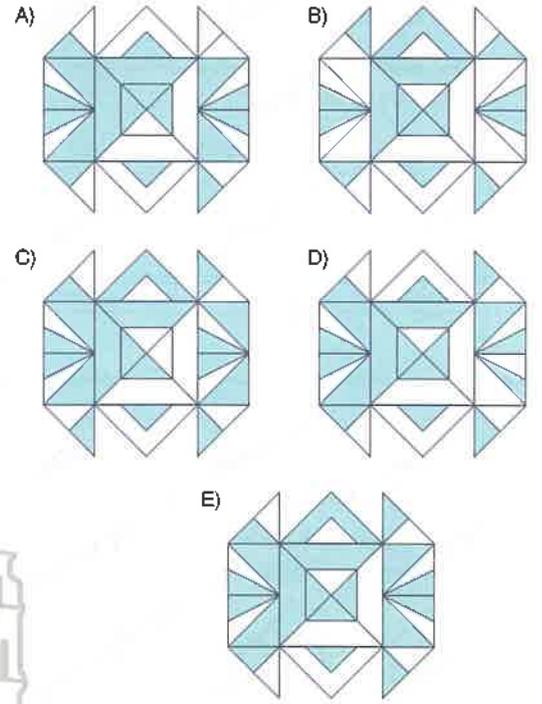


4.

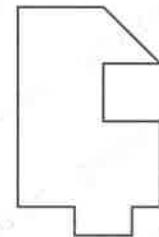




Yukarıdaki şeklin karşıtı (negatif) hangisidir?
Which is the opposite (negative) of the above figure?



Şekil - I
(Figure I)



Şekil - II
(Figure II)

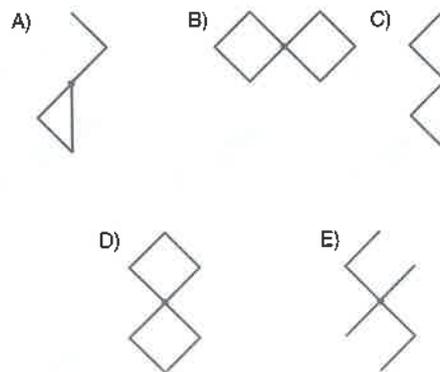
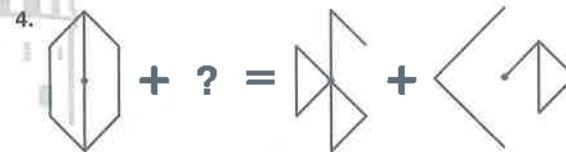
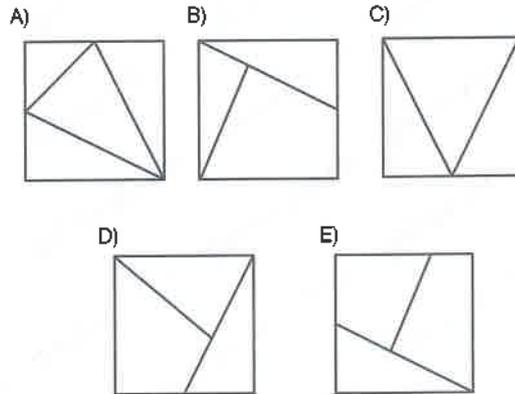
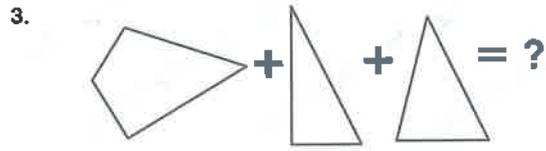
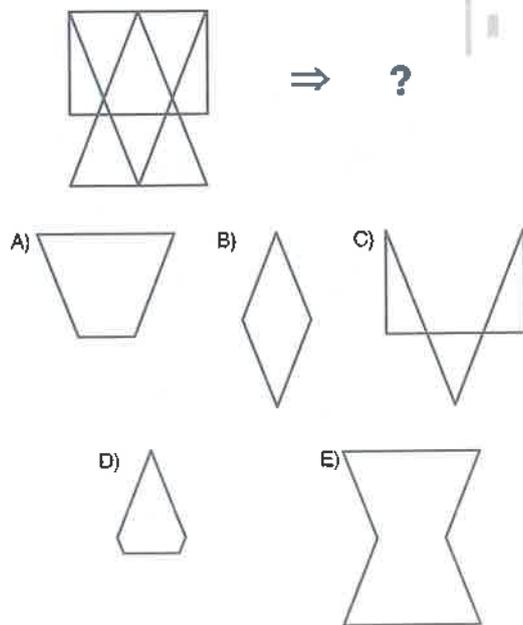
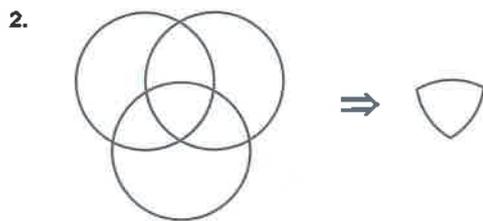
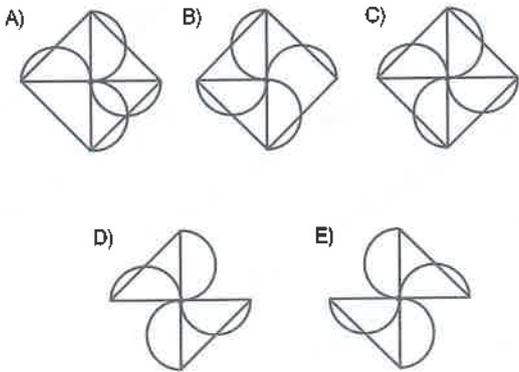
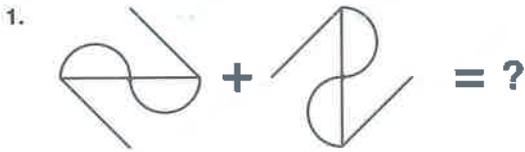
Yukarıdaki şekil - II, şekil - I'den hangi parçaların atılmasıyla oluşmuştur?

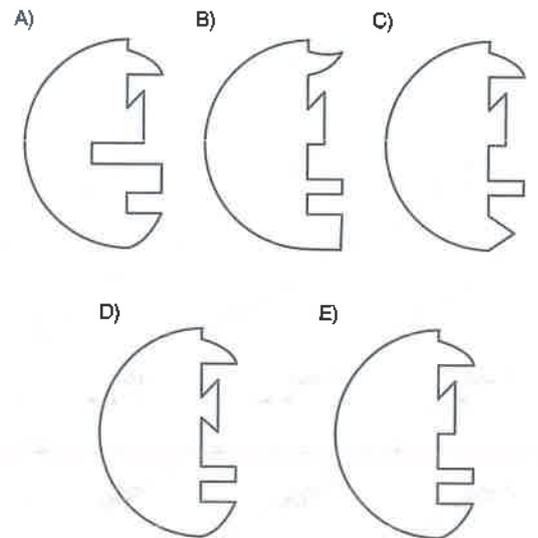
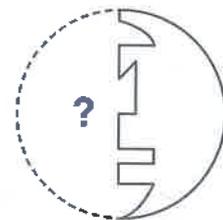
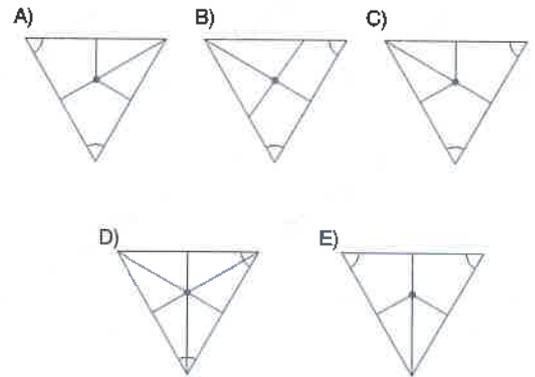
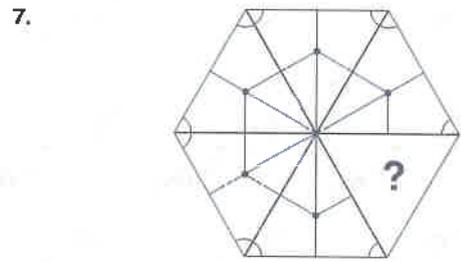
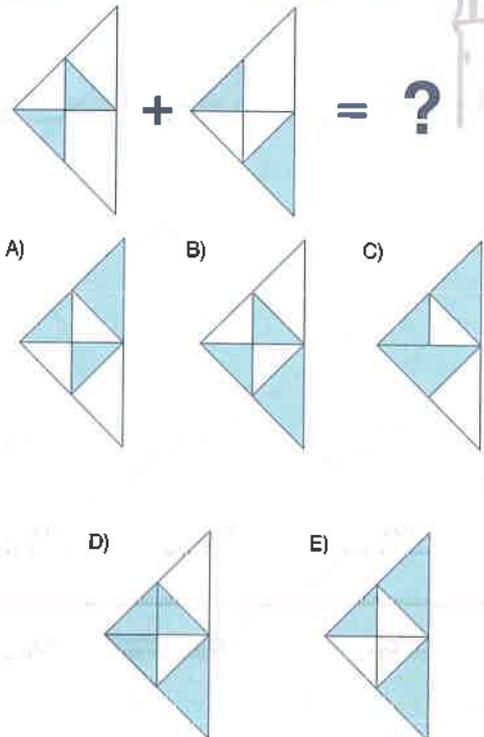
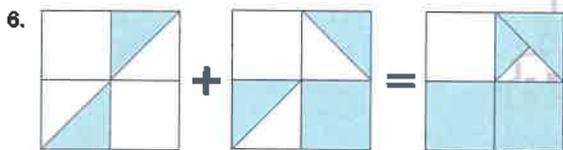
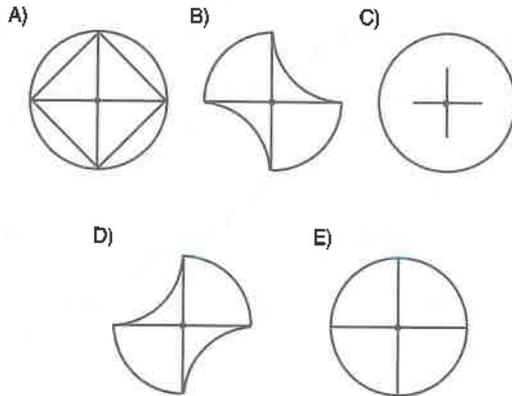
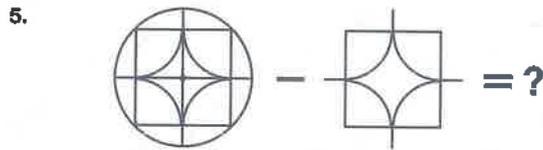
Which parts to form the figure - II above were discarded from figure - I?

- A) 2 - 6 B) 2 - 7 C) 3 - 6 D) 2 - 5 E) 2 - 8

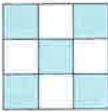
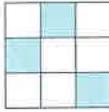
7 - E

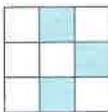
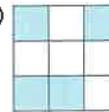
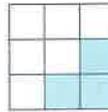
8 - A

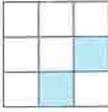
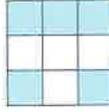


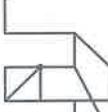


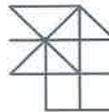
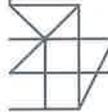
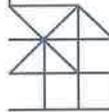
1.  +  = 

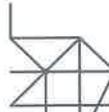
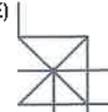
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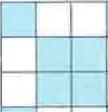
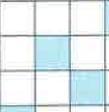
A)  B)  C) 

D)  E) 

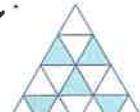
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D)  E) 

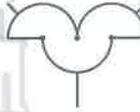
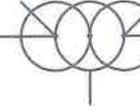
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 -  = ?

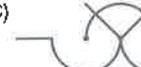
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C)  D) 

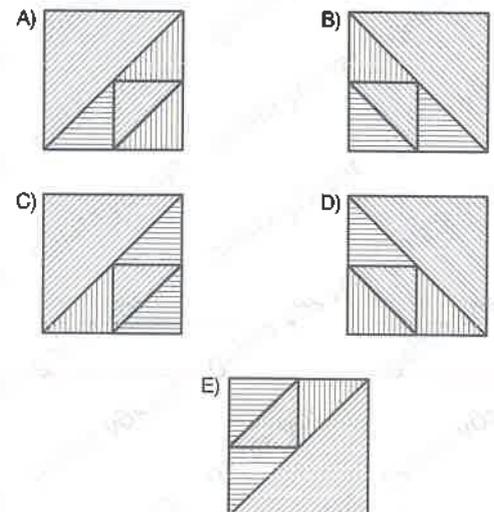
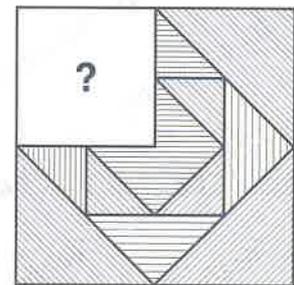
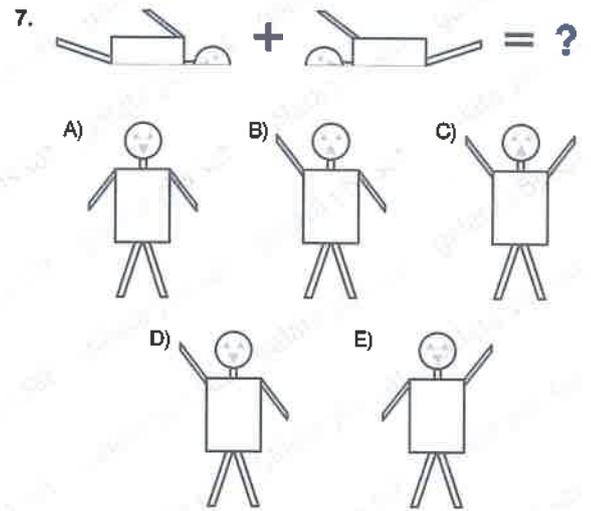
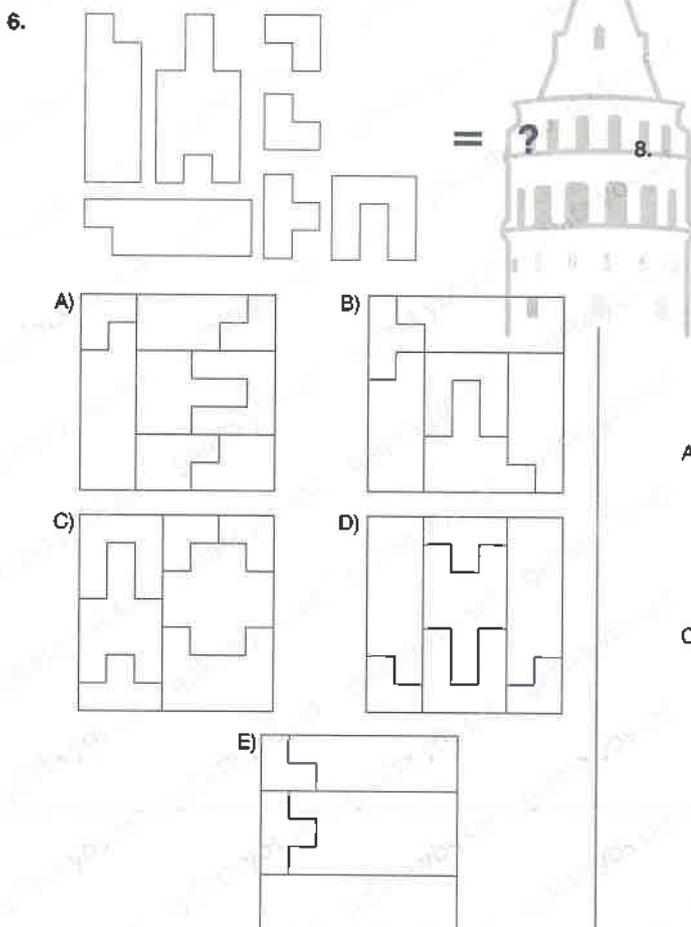
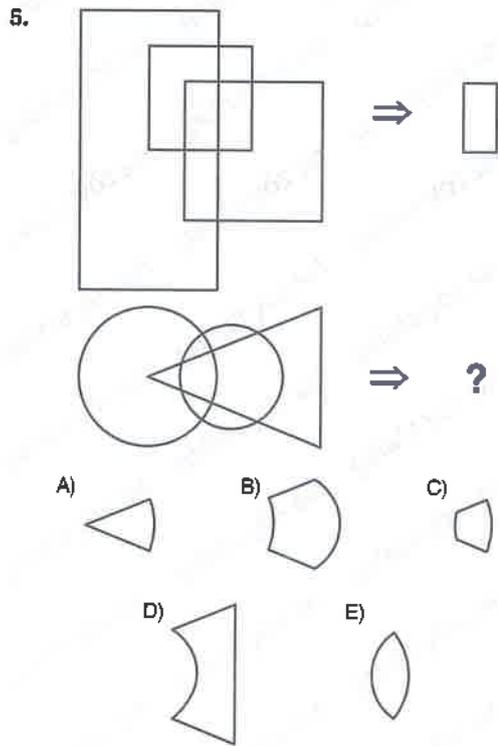
E) 

4.  + ? = 

A)  B) 

C)  D) 

E) 



1.

A) B) C)
 D) E)

3.

A) B) C)
 D) E)

2.

A) B) C)
 D) E)

4.

A) B) C)
 D) E)

5.

A) B) C) D) E)

6.

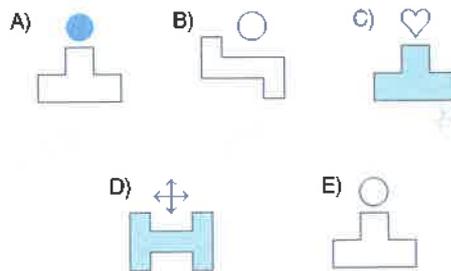
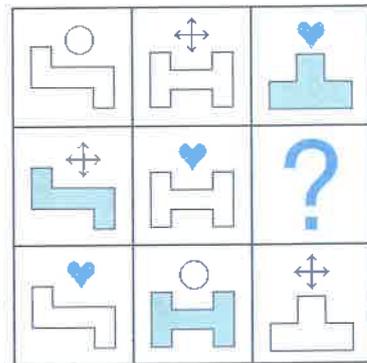
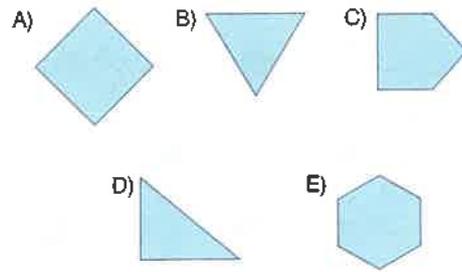
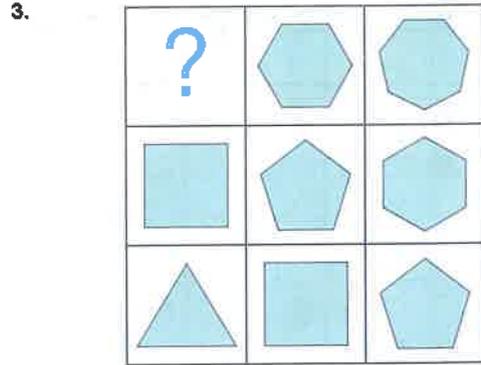
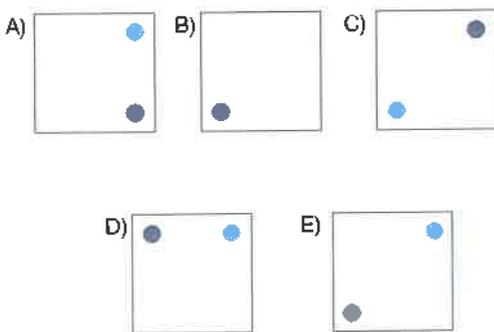
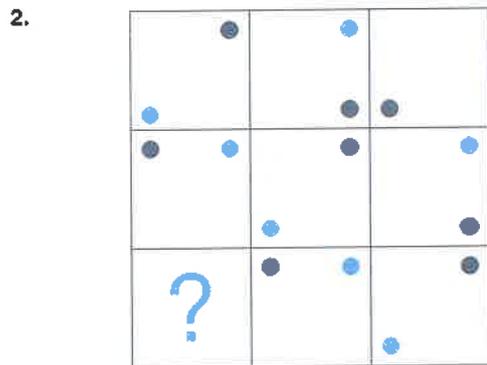
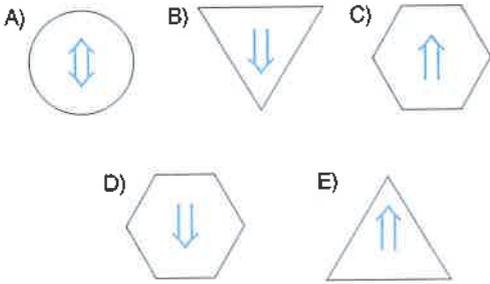
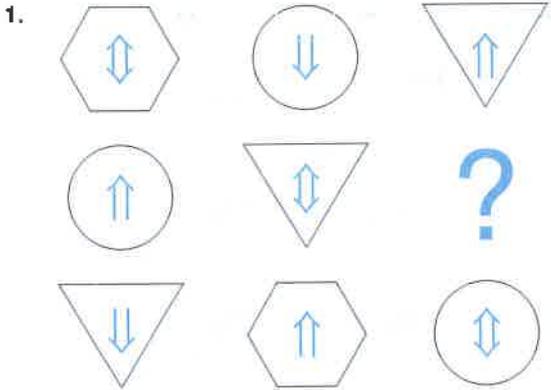
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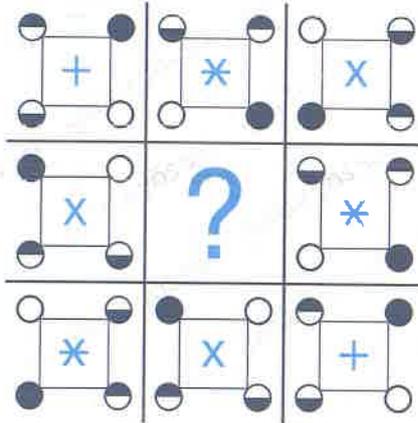
A) B) C) D) E)

8.

A) B) C) D) E)



5.



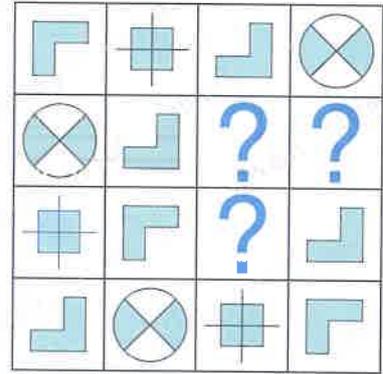
- A)
- B)
- C)
- D)
- E)

6.

AZ	XB	YC
XC	AY	BZ
?	ZC	XA

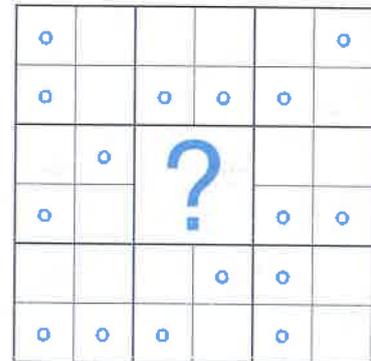
- A) **BZ** B) **AY** C) **YC**
- D) **BX** E) **YB**

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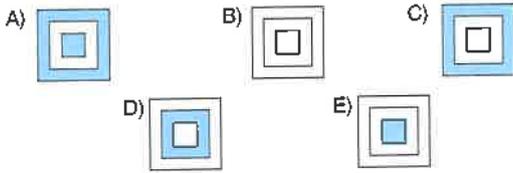
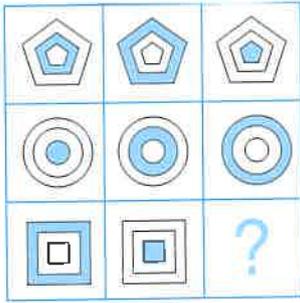
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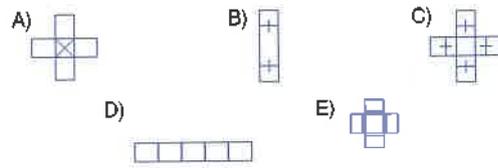
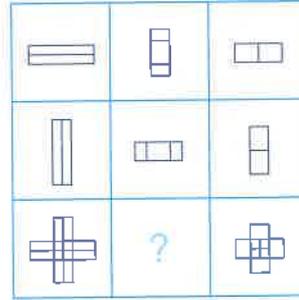


- A)
- B)
- C)
- D)
- E)

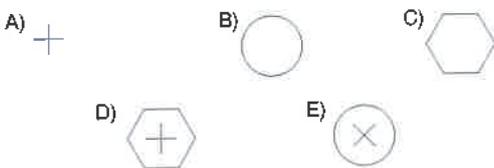
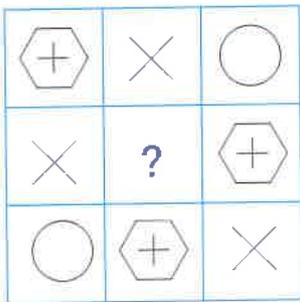
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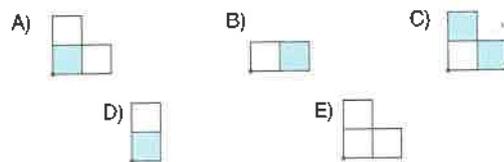
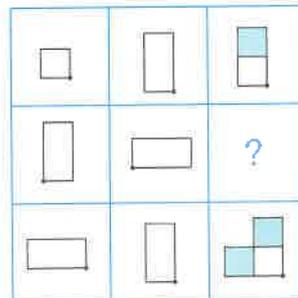
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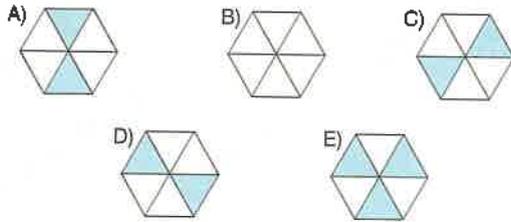
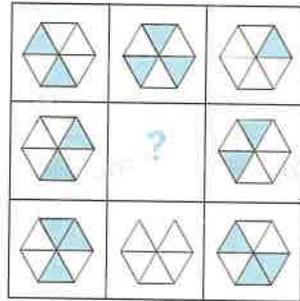
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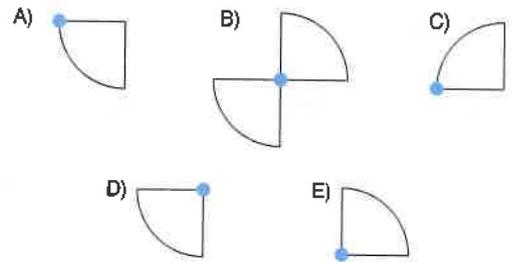
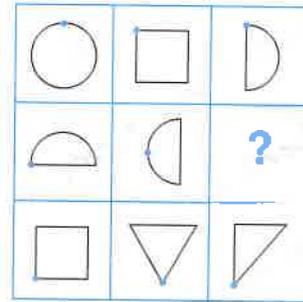
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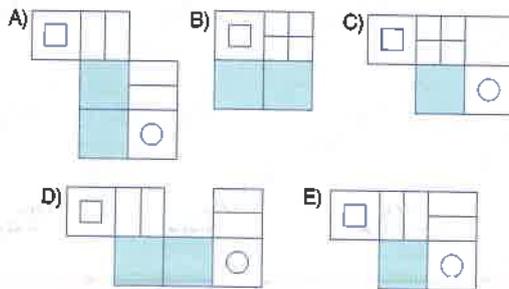
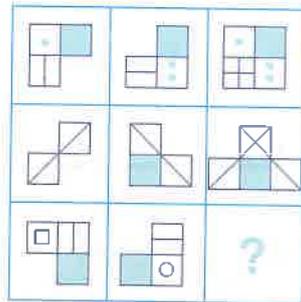
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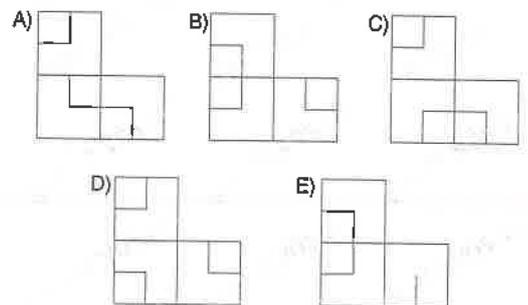
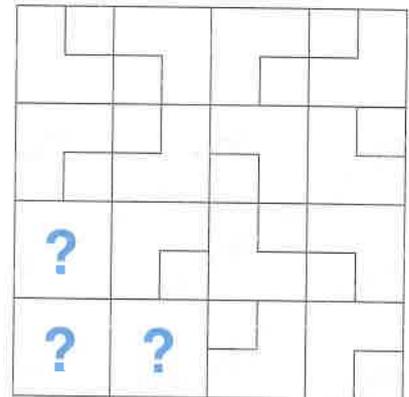
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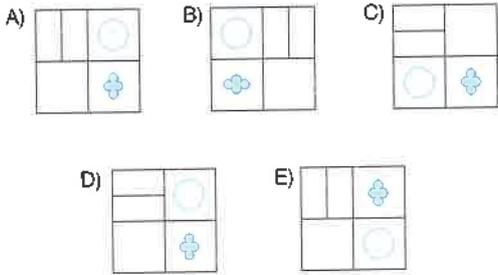
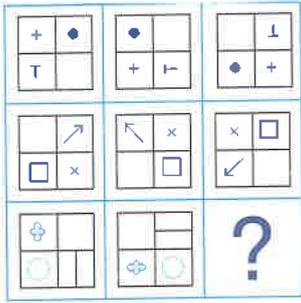
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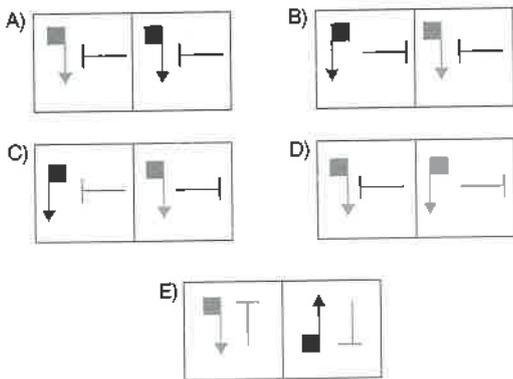
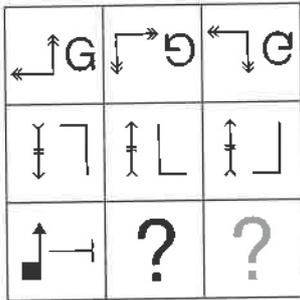
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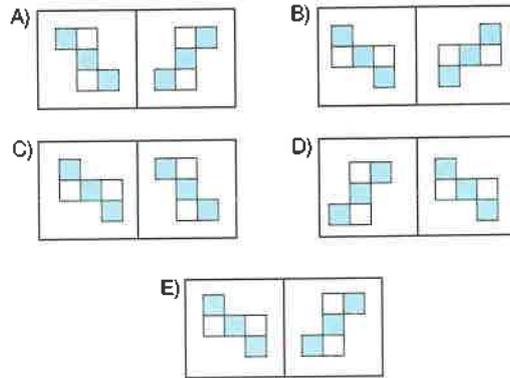
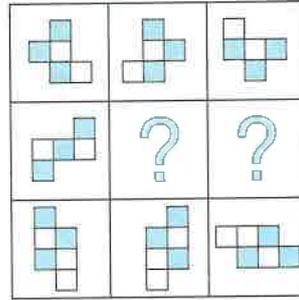
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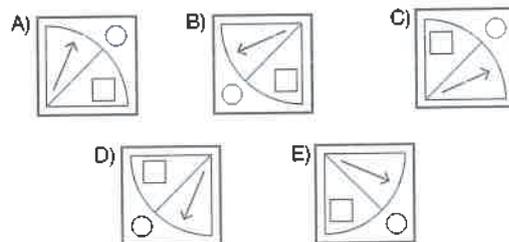
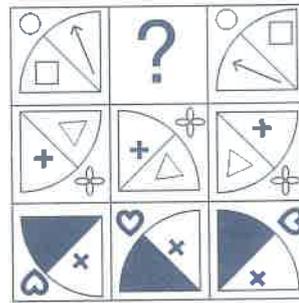
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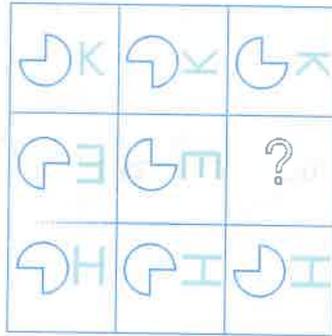
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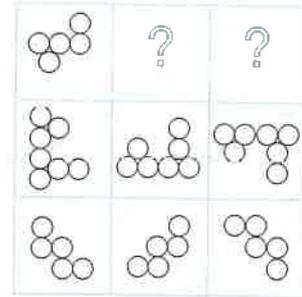


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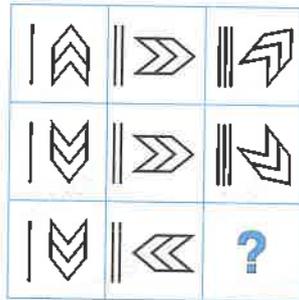
- A) B) C)
 D) E)

7.



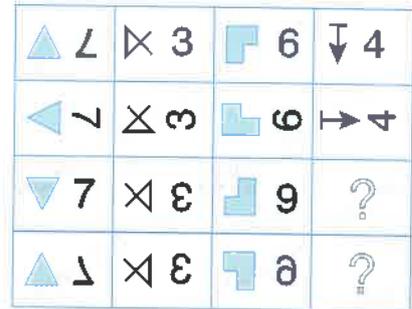
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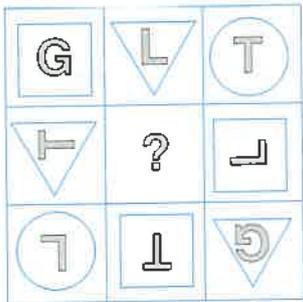
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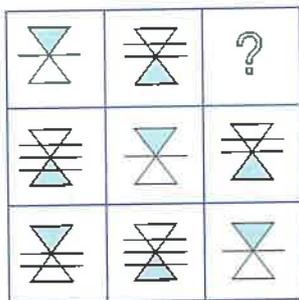
- A) B) C)
 D) E)

1.



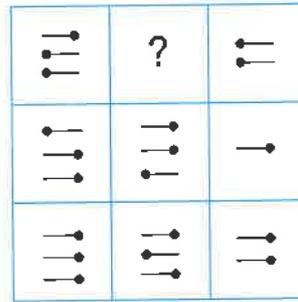
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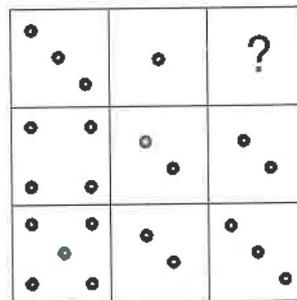
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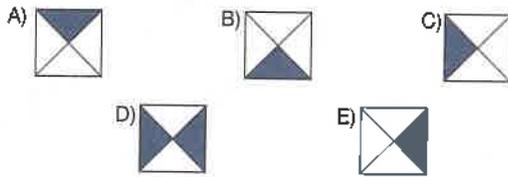
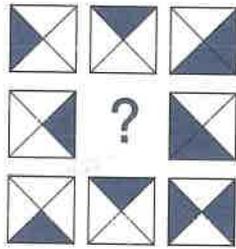
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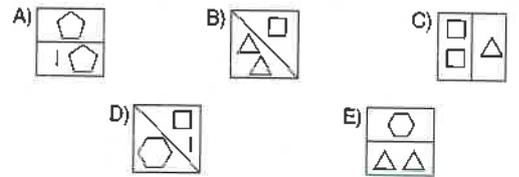
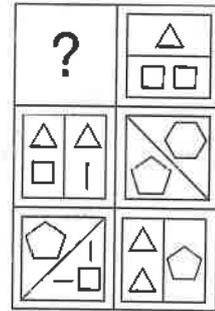


- A) B) C) D) E)

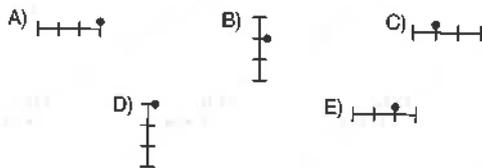
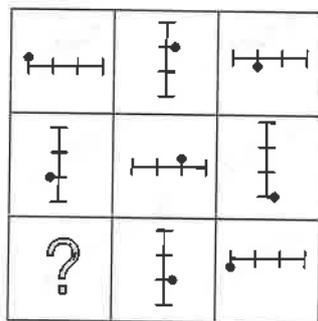
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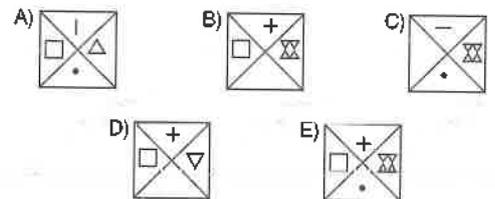
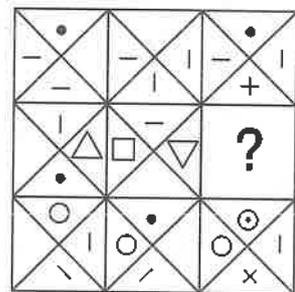
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6.



8.



1.

B	A	C	E	B	D
D	E	B	C	E	A
A	D	E	D	C	B
C	B	A	D	E	C

B
?
D
C

- A) B B) C C) D D) E E) A

3.

⊙	⊗	⊗	⊗	△
⊗	△	▽	⊙	⊗
▽	⊗	▽	⊙	⊙
⊙	△	▽	⊗	⊗
⊗▽	?	⊗	—	⊙△

- A) ⊗ B) — C) △ D) ▽ E) △⊗

2.

☹	☹	☹	☹	☹
☹	☹	☹	☺	☹
☺	☹	☺	☹	☹
☹	☹	☹	☹	☹
☹	☹	☺	☺	☹
☺	☹	☹	?	☹

- A) ☹ B) ☺ C) ☺
D) ☹ E) ☹

4.

6	8	6	7	4	8	6
5	4	3	6	3	5	3
7	6	1	4	7	4	?
2	5	8	4	8	2	8

- A) 7 B) 6 C) 4
D) 3 E) 1



5.

λ	%	Σ	+
∅	∈	%	∅
∈	Σ	X	λ
λ	∅	Σ	%
#	+	%	∅
λ	?	Σ	%

A) %

B) ∈

C) Σ

D) ∅

E) +

7.

△○	□△	☆◇	○▽	△○
○□	☆◇	▽○	☆□	◇☆
□▽	○○	□☆	△▽	?
☆◇	□□	○△	○☆	□○

A) □□

B) □▽

C) ○△

D) ☆○

E) ▽△

6.

■	●	▲	●	●
●	▽	▽	▽	▽
⬡	☆	■	▲	☆
▽	●	⬡	■	?

A) ▽

B) ☆

C) ■

D) ⬡

E) ▲

8.

ARX	YDM	CZE	XPC
XAB	BXC	KEB	ABX
YCZ	MYX	AZD	ZYX
AXY	?	EEA	BCZ

A) XBM

B) YBX

C) YXX

D) MBM

E) XMM

1.

		?
	-	

- A) B) C)
 D) E)

2.

	BKRK	KRR	BBR
R	KKB	RK	?
B	RKK	RKBR	?
K	RBK	RR	KBRB

- A)

BR
BB

 B)

BB
R

 C)

BRRB
BR

 D)

BB
RB

 E)

RR
BB

3.

			B
		A	-

A; B = ?; ?

- A)
 B)
 C)
 D)
 E)

4.

	-	
		?

- A) B) C)
 D) E)

5.

	ZYM	KNZ	MXN
XY	Y	?	X
NX	-	N	XN

- A) N B) YN C) X
 D) - E) KZ

6.

			
			
		X	
			Y

X ; Y = ? ; ?

- A)  ;  B)  ;  C)  ; 
 D)  ;  E)  ; 

7.

		
		B
	A	

A ; B = ? ; ?

- A)  ;  B)  ; 
 C)  ;  D)  ; 
 E)  ; 

8.

			
			
		?	
			

- A)  B)  C) 
 D)  E) 

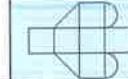
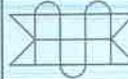
1.

	I	II	III
	3	A	9
	B	4	8
	5	3	C

A : B = ? : ? : ?

- A) 6 : 4 : 8 B) 3 : 2 : 15 C) 2 : 3 : 8
D) 2 : 4 : 15 E) 6 : 4 : 15

3.

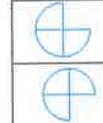
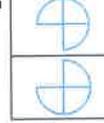
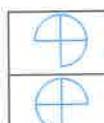
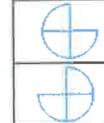
		
I	2	4
II	6	X
III	Y	3

X : Y = ? : ?

- A) 2 : 4 B) 6 : 4 C) 2 : 3 D) 6 : 2 E) 4 : 4

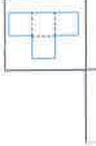
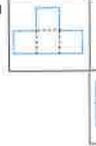
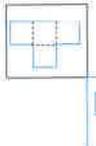
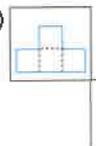
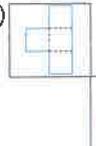
2.

			
I			?
II			?

- A)  B)  C) 
D)  E) 

4.

		
	?	
		?

- A)  B) 
C)  D) 
E) 

5.

	5	7	C
	2	B	1
	A	2	4

$$A + B - C = ?$$

- A) 5 B) 4 C) 3 D) 1 E) 0

7.

	5	L	3
	K	12	M

$$K + L + M = ?$$

- A) 16 B) 17 C) 18 D) 19 E) 20

6.

	X	9	4
	3	5	Y
	1	Z	4

$$X \cdot Y \cdot Z = ?$$

- A) 36 B) 40 C) 45 D) 50 E) 54

8.

<table border="1"><tr><td>4</td><td>1</td><td>2</td></tr><tr><td>4</td><td>2</td><td>3</td></tr><tr><td>3</td><td>4</td><td>1</td></tr></table>	4	1	2	4	2	3	3	4	1	A	3	4
4	1	2										
4	2	3										
3	4	1										
<table border="1"><tr><td>3</td><td>2</td><td>3</td></tr><tr><td>2</td><td>2</td><td>2</td></tr><tr><td>3</td><td>2</td><td>2</td></tr></table>	3	2	3	2	2	2	3	2	2	2	6	B
3	2	3										
2	2	2										
3	2	2										
<table border="1"><tr><td>4</td><td>5</td><td>4</td></tr><tr><td>1</td><td>4</td><td>5</td></tr><tr><td>5</td><td>5</td><td>4</td></tr></table>	4	5	4	1	4	5	5	5	4	3	C	5
4	5	4										
1	4	5										
5	5	4										

$$(A, B, C) = (?, ?, ?)$$

- A) (3, 2, 5) B) (4, 4, 3) C) (4, 3, 5)
D) (3, 5, 3) E) (4, 2, 5)

1.

- A) B) C)
- D) E)

2.

	A	B

- A)
- B)
- C)
- D)
- E)

3.

- A) B) C)
- D) E)

4.

M	N	M	K	M
?	L	P	R	P
H	P	N	H	?
R	K	K	M	K
H	L	P	R	

- A) H; H B) P; N C) L; H D) H; N E) P; P

5.

			?
		—	

- A)
- B)
- C)
- D)
- E)

6.

+	≠	X	+	X	≠
○	<	+	<	○	?
X	∅	<	∅	<	X
○	≠	X	≠	X	○
≠	>	X	≠	>	X
○	≠	X	?	X	

- A) + ; ○ B) < ; ○ C) ≠ ; <
- D) ∅ ; + E) + ; ≠

7.

47	34	75	36	43
64	45	25	48	54
85	38	96	56	?
58	72	32	81	28
37	53	41	95	39

- A) 36 B) 65 C) 68 D) 93 E) 85

8.

	I	II	III
	A	7	4
	3	B	9
	8	10	C

$A + B + C = ?$

- A) 18 B) 19 C) 20 D) 21 E) 22

1.

9	7	8	2	5	4
6	8	6	3	3	2
3	9	5	7	4	6
7	3	6	9	5	8
5	2	8	4	6	3
3	5	3	6	2	7

A				B	B
B	A	B		C	D

A = 5 B = 3 C = ? D = ?

Her harf farklı bir rakam göstermektedir. I ve II yukarıdaki tablonun farklı birer parçası olduğuna göre, C ve D değerleri kaçtır?

Each letter shows a different number. Since I and II are different parts of the above table, what are the values of C and D?

- A) C = 6; D = 7 B) C = 8; D = 2
 C) C = 7; D = 4 D) C = 6; D = 9
 E) C = 9; D = 4

2.

⊙	☆	+	△
□	☆	⊙	△
☆	□	△	☆
△	+	☆	⊙

K	M
L	M
△	M
M	

K = ?
L = ?
M = ?

- | | | | |
|----|----------|----------|----------|
| | <u>K</u> | <u>L</u> | <u>M</u> |
| A) | □ | ☆ | △ |
| B) | + | ⊙ | △ |
| C) | □ | + | ☆ |
| D) | ⊙ | □ | ☆ |
| E) | △ | + | □ |

3.

⬠	○	◇	□	⬠	△
○	⬠	△	⬠	○	◇
◇	□	△	⬠	△	⬠
□	○	○	△	□	○
△	⬠	□	⬠	○	◇
⬠	○	□	⬠	◇	△

	X			
X	Z	Y		
	Y			

⇒ Z = ?

- A) △ B) ○ C) □
 D) ⬠ E) ⬠

4.

&	&	≥	%	≥	X
∈	X	X	≥	∅	%
∅	%	∅	&	≥	≥
X	≥	X	∈	∅	%
%	X	&	≥	X	∈

A		A		A	A
B	A	C		∅	

A = ? B = ? C = ?

- | | | | |
|----|----------|----------|----------|
| | <u>A</u> | <u>B</u> | <u>C</u> |
| A) | & | ∈ | ∅ |
| B) | X | % | & |
| C) | & | ≥ | % |
| D) | X | ∅ | ∈ |
| E) | ≥ | X | ∅ |

5.

E	H	A	B
A	E	C	D
C	D	H	B
D	C	A	E

∞	☒	○	?
○	∞	?	?
✕	♥	?	☆
♥	✕	○	∞

- A)

☆	
✕	♥
♥	○
- B)

♥	
○	☆
✕	○
- C)

☆	
✕	♥
☒	○
- D)

♥	
✕	☒
○	○
- E)

☆	
♥	∞
✕	○

7.

P	K	L
S	M	N
N	?	?
K	P	?
L	O	S

↘	✕	S
↗	+	O
O	S	↘
✕	↘	+
S	➔	↗

- A)

L	P
S	
- B)

N	P
M	
- C)

L	P
	O
- D)

L	P
	M
- E)

M	P
	S

6.

➔	◇	∧	➔	✕
∧	☐	⊕	☐	◇
☐	✕	☐	∧	⊕

5	?	9	5	2
9	?	3	6	8
6	?	7	9	3

- A)

7
9
6
- B)

8
7
2
- C)

8
6
2
- D)

8
7
3
- E)

7
6
3

8.

☆	▽	☐	○
○	◇	✕	△
◇	☐	▽	☆
△	✕	○	◇

↖	➔	↓	↘
↘	↑	←	↙
↑	?	?	?
↙	←	↘	↑

- A)

↓	➔	↘
---	---	---
- B)

↖	←	↓
---	---	---
- C)

↑	➔	↘
---	---	---
- D)

↓	➔	↘
---	---	---
- E)

↑	←	↘
---	---	---

1. I. II.

G	A	★	T	3	8	6	5
O	L	G	☼	7	?	?	9
☼	★	T	L	9	?	?	1
T	G	O	A	5	3	7	8

- A)

1	5
6	8

 B)

1	3
5	9

 C)

1	3
6	5
- D)

1	5
9	3

 E)

1	8
5	6

2.

G	└	┘
I.	└	┘
⊖	II.	T

- A)

I.
⊖

II.
└
- B)

G

└

- C)

G

└

- D)

⊖

└

- E)

⊖

L

3.

- A)
- B)
- C)
- D)
- E)



		X	
		Y	

- X Y
- A)

--

--
- B)

--

--
- C)

--

--
- D)

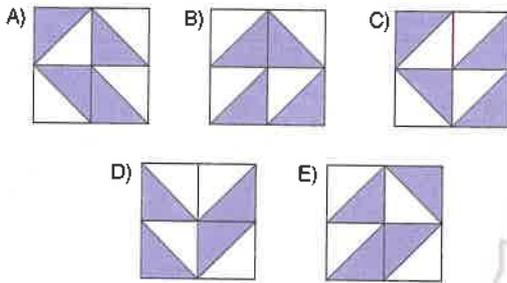
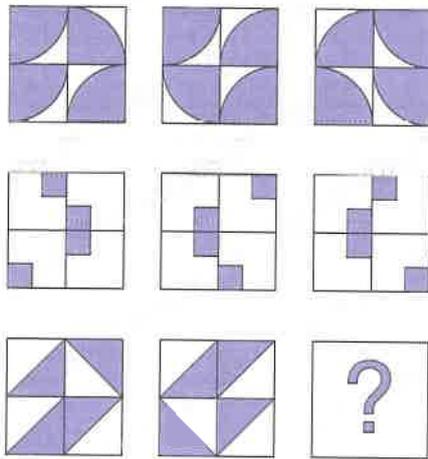
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- E)

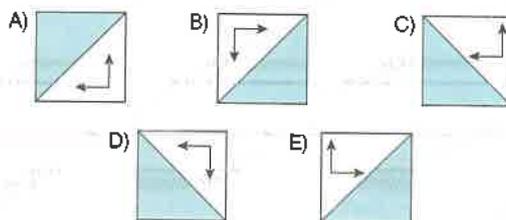
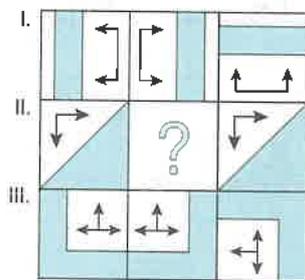
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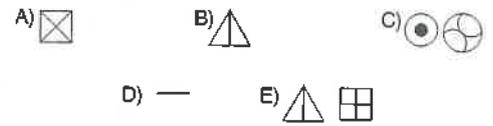
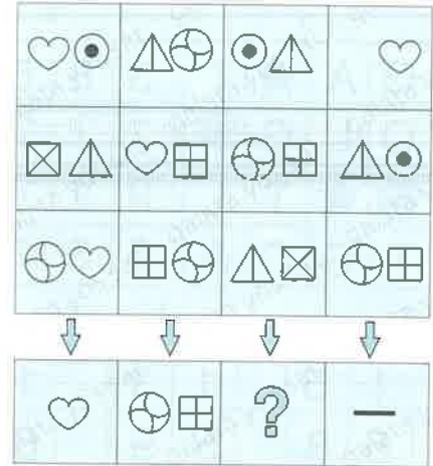
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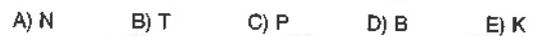
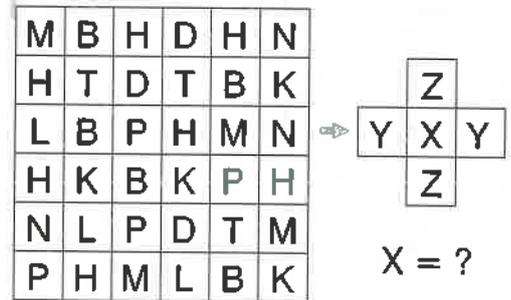
6.



7.



8.



1.

?		

- A)
- B)
- C)
- D)
- E)

2.

Σ	δ	∅	\$
\$	∅	Σ	€
€	∅	#	δ
?	#	δ	∅
Σ	∅	Σ	\$

- A) Σ B) \$ C) €
- D) ∅ E) \$

3.

	KML	MNK	NLK
MK		N	
KN		?	
LM	K		MKN

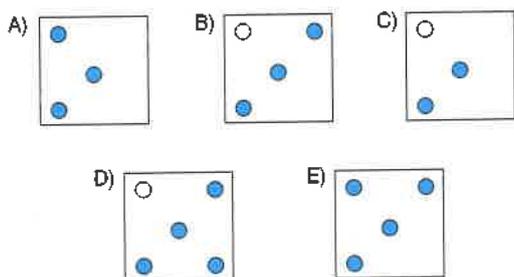
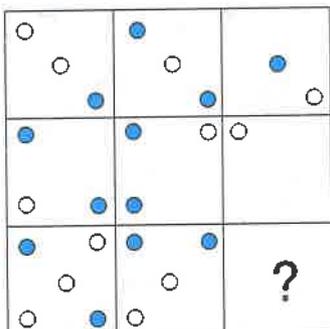
- A) NK B) K C) MK
- D) M E) N

4.

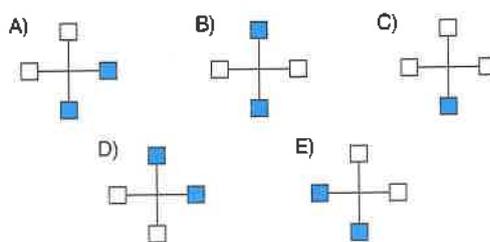
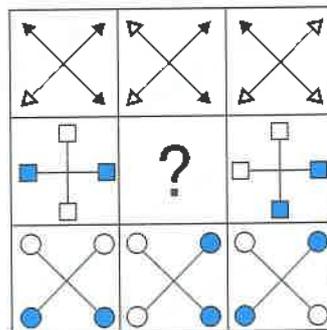
			?

- A)
- B)
- C)
- D)
- E)

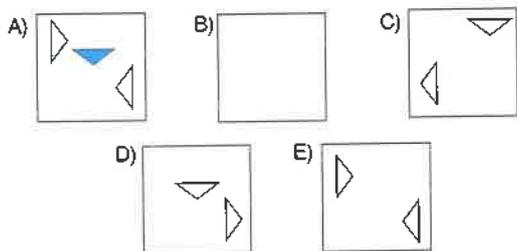
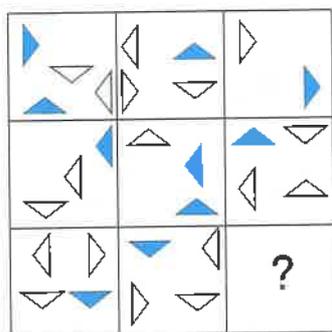
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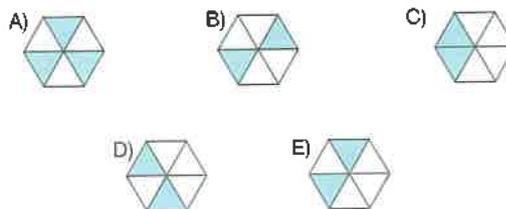
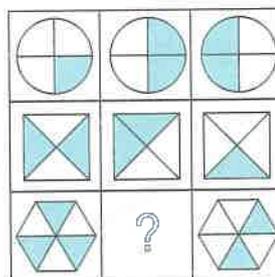
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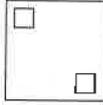
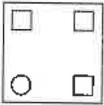
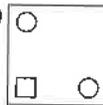
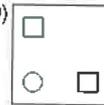
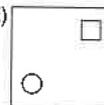


4.



5.

○ □	○ ○	□
□ ○	□ ○	□ ○
○ ○	□ ○	□
□ ○	□ □	○ ○
?	○	□

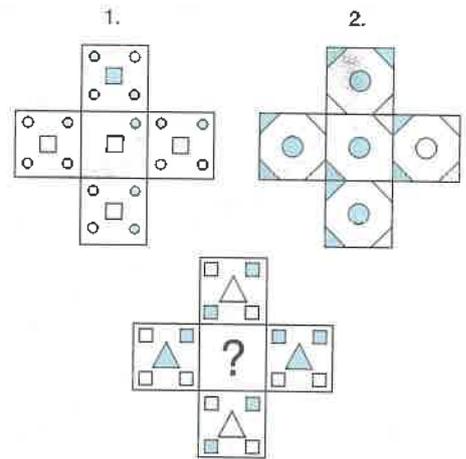
- A)  B)  C) 
- D)  E) 

6.

+		X
+	+	+
X	+	X
+	X	X
+	X	+
X	X	+
X		?

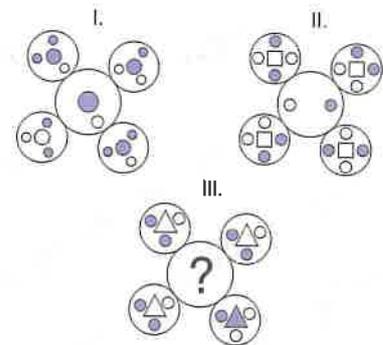
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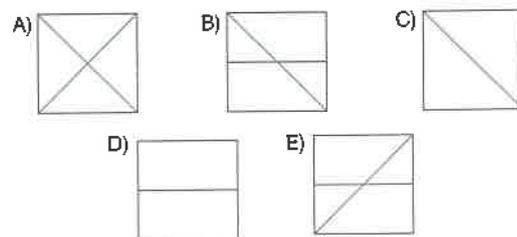
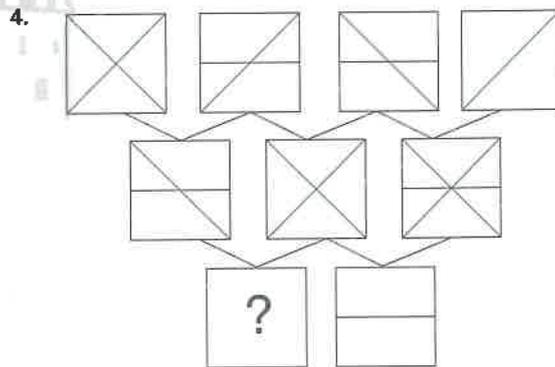
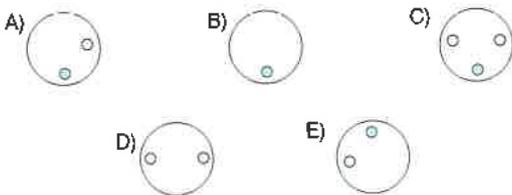
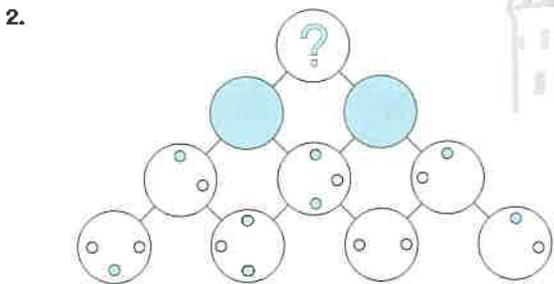
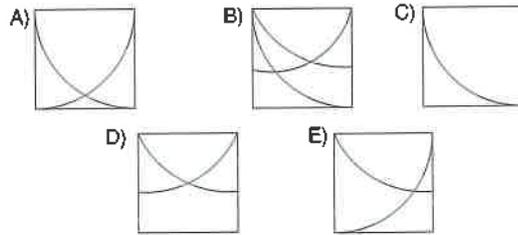
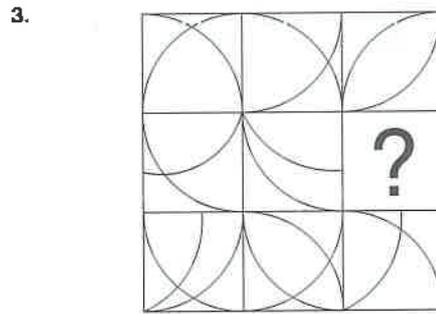
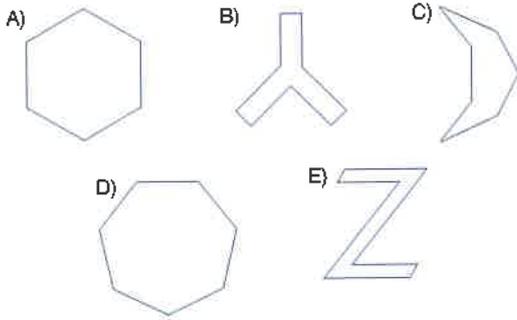
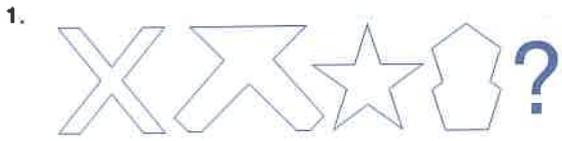


- A)  B)  C) 
- D)  E) 

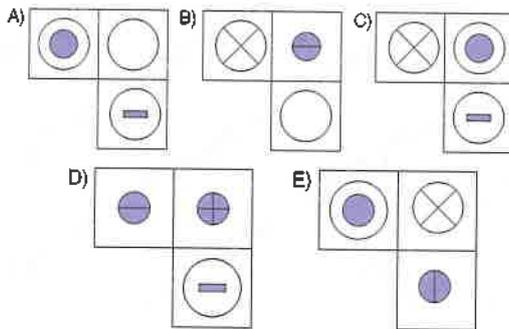
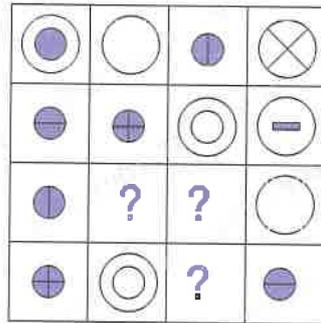
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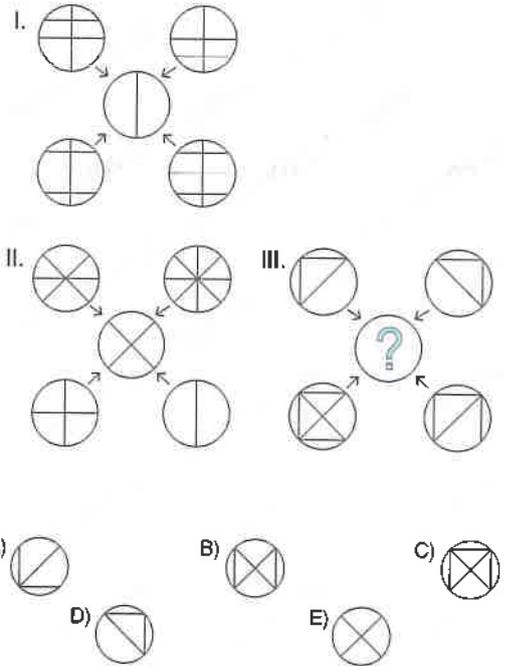
- A)  B)  C) 
- D)  E) 



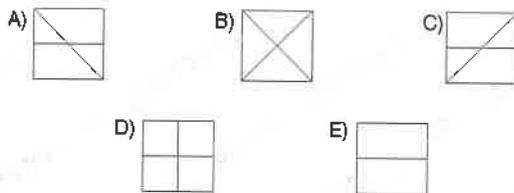
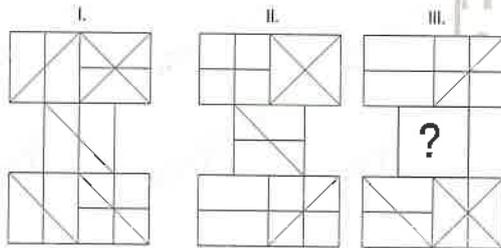
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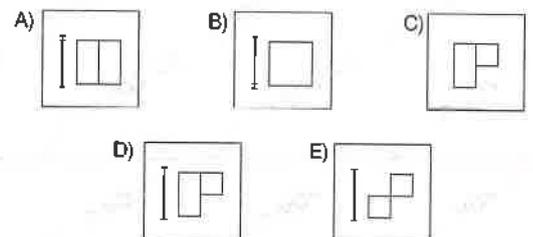
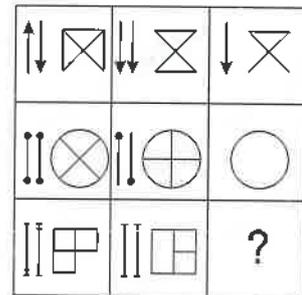
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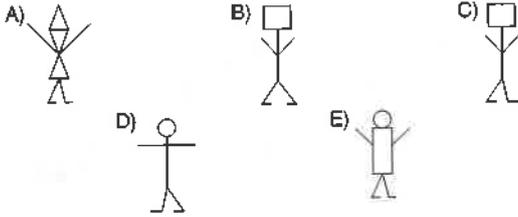
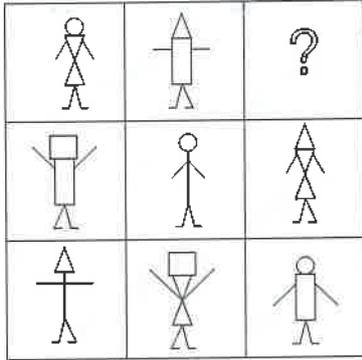
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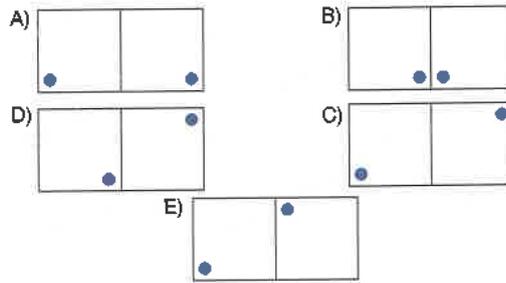
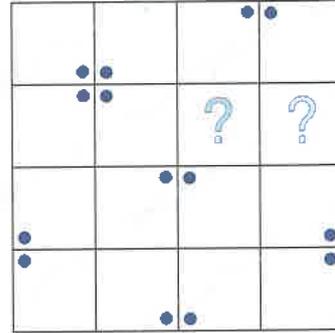
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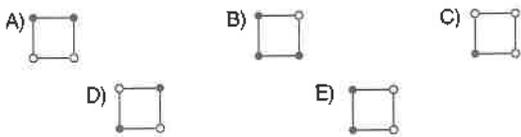
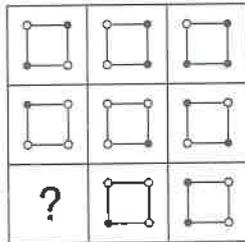
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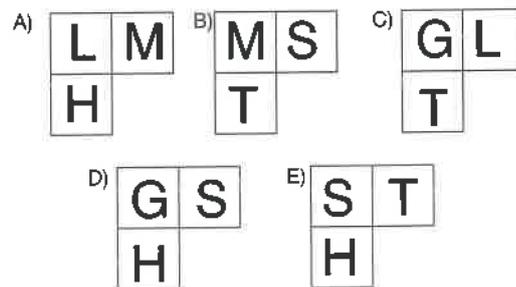
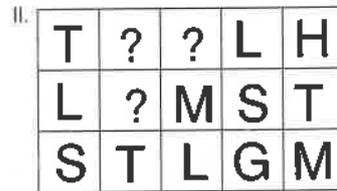
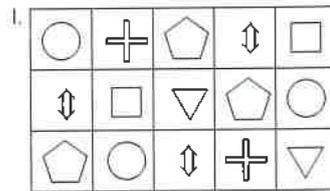
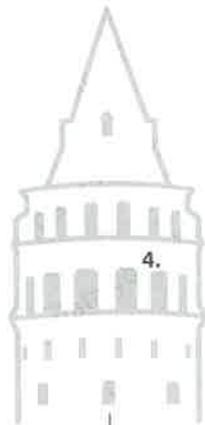
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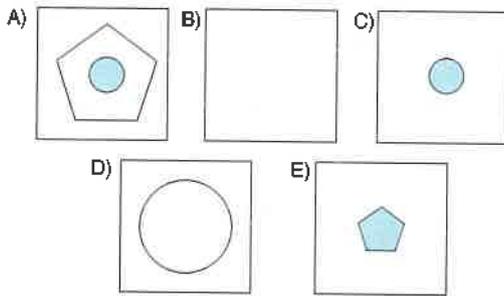
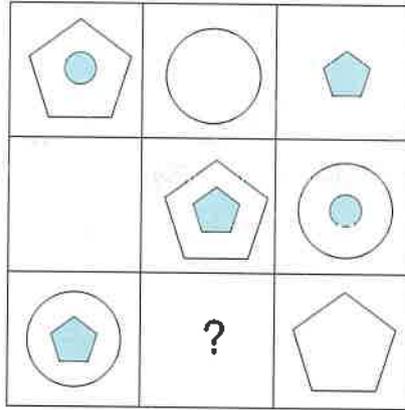
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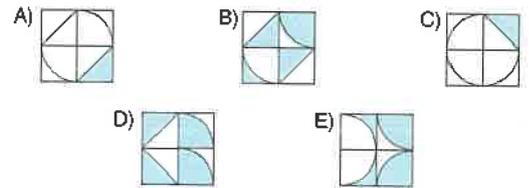
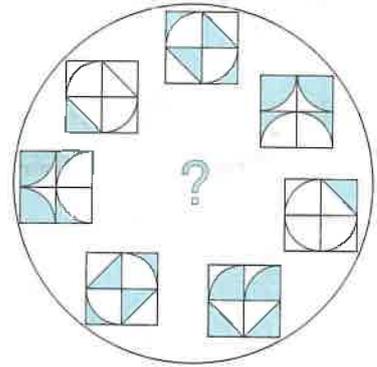
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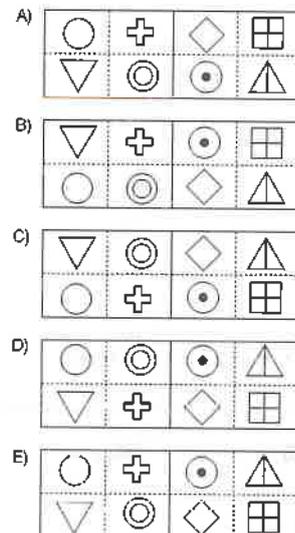
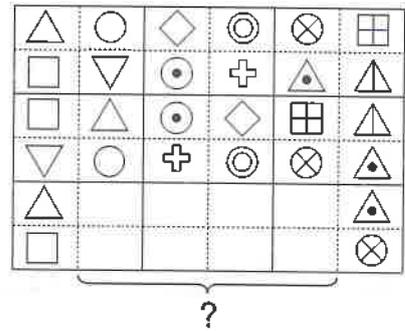
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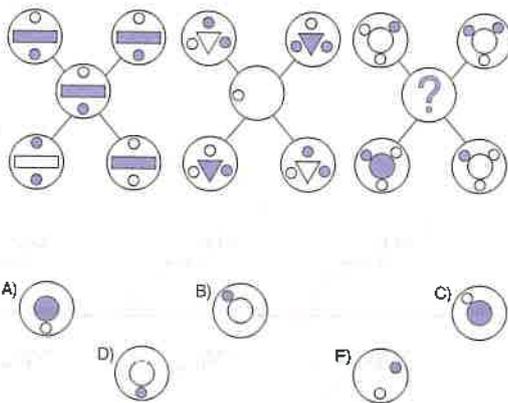
7.



8.



6.



1.

		?	

- A)
- B)
- C)
- D)
- E)

2.

		?	?	
		?	?	

- A)

- B)

- C)

- D)

- E)

3.

		?

- A)

--
- B)

--
- C)

--
- D)

--
- E)

--

4.

	?	?	

- A)

--	--
- B)

--	--
- C)

--	--
- D)

--	--
- E)

--	--

5.

A) B) C)
 D) E)

6.

→ 9	← 6	↓ 6	↑ 6
↓ 6	→ 9	↑ 6	← 6
← 6	↑ 6	→ 9	↓ 6
↑ 6	↓ 6	← 6	→ 9

R = ? D = ?

A) → 9 B) ← 6 C) → 6
 D) ← 6 E) ← 9

7.

A) B) C)
 D) E)

8.

B	E	S	T	O	O
H	S	M	E	M	G
N	G	S	L	S	R
T	M	E	D	L	D
S	F	N	F	N	A
G	R	M	R	O	N

↓ = ?
 = ?

A) = S B) = F C) = N
 = R = N = E
 D) = M E) = D
 = G = L

1. I II III IV ?

Y		
	Ö	
		S

		Y
		S
		Ö

Ö		S
		Y

A)

S		
	Ö	
Y		

 B)

		Ö
		S
		Y

 C)

		Ö
Y		S

D)

Ö		
Y		S

 E)

		S
	Ö	
Y		

3.

2	8	8	5	5	7
7	5	2	7	8	2

A)

8	2
5	7

 B)

8	5
2	7

 C)

7	2
5	8

D)

7	2
5	8

 E)

8	5
2	7



2.

1. → 2. → 3. → 4. → ?

A) B) C) D) E)

4.

I.

∇	▷
---	---

II.

▷	↓
---	---

III.

A	↑
---	---

IV. ?

A)

▷	↓
---	---

 B)

◁	↑
---	---

 C)

◁	↓
---	---

D)

∇	↑
---	---

 E)

◁	↓
---	---

5.

A)

B)

C)

D)

E)

7.

1.

2.

3.

4.

5.

A)

B)

C)

D)

E)

6.

I

II

III

IV

V

A)

B)

C)

D)

E)

8.

1.

2.

3.

4.

A)

B)

C)

D)

E)

1. I. II. III. IV. V. ?

A) B) C) D) E)

2. ?

A) B) C) D) E)

3. I. II. III. VI. ?

A) B) C) D) E)

4. ?

A) B) C) D) E)

5. I. II. III. IV.

A) B) C) D) E)

7.

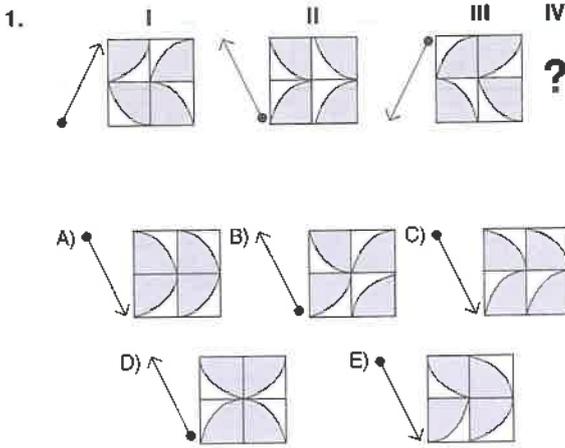
A) B) C) D) E)

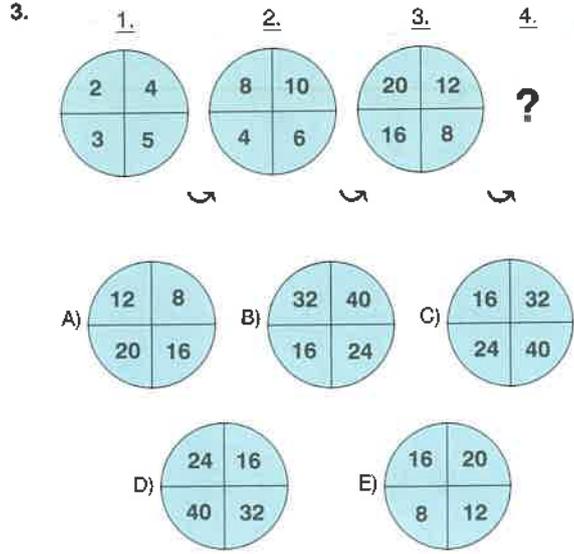
6. 1. 2. 3. 4. 5.

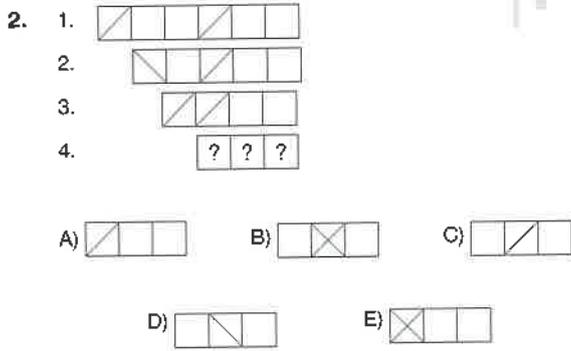
A) B) C) D) E)

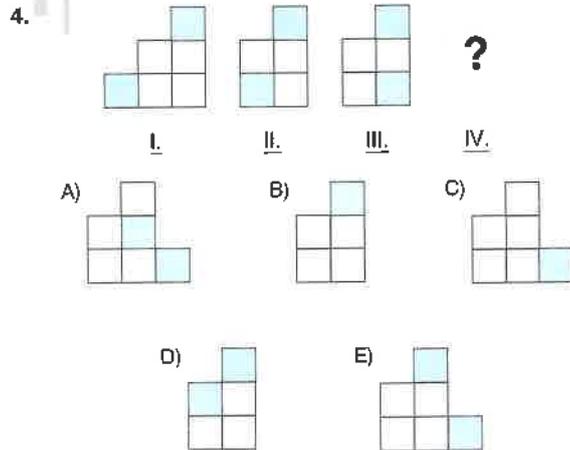
8.

A) B) C) D) E)

1. 

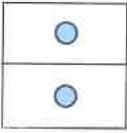
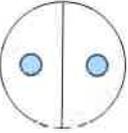
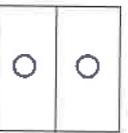
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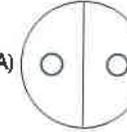
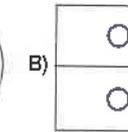
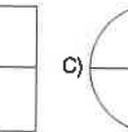
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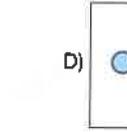
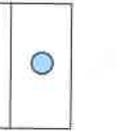
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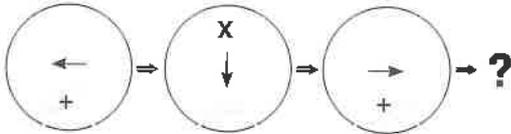
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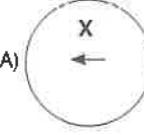
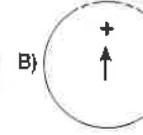
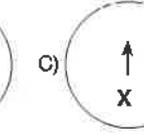
1.  2.  3.  4. ?

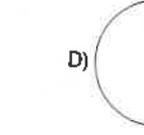
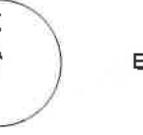
A)  B)  C) 

D)  E) 

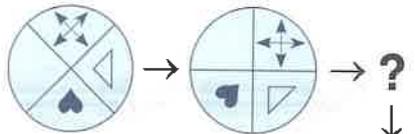
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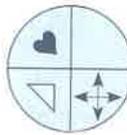


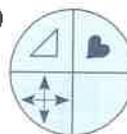
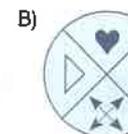
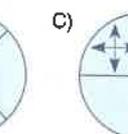
A)  B)  C) 

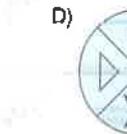
D)  E) 

6.

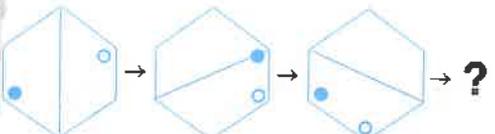


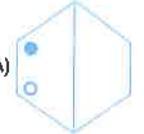
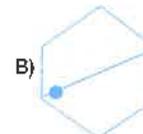
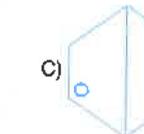


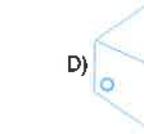
A)  B)  C) 

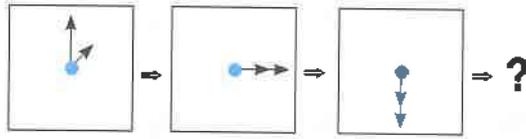
D)  E) 

8.

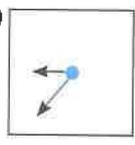
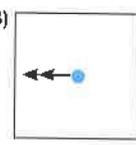
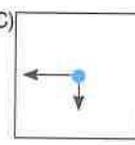


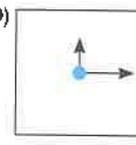
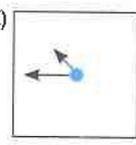
A)  B)  C) 

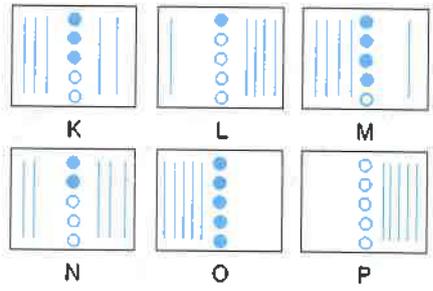
D)  E) 

5. 

1. 2. 3. 4.

A)  B)  C) 

D)  E) 

7. 

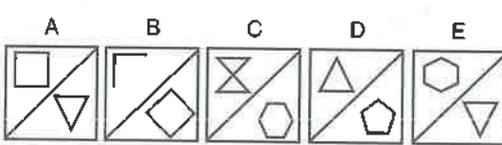
K L M

N O P

Yukarıdaki şekiller sıraya konulursa baştan 1. şekil P oluyor. Buna göre, baştan 4. şekil hangisi olur?

If all figures above are put in order, P comes in 1st place from the beginning. Accordingly, which figure comes in 4th place from the beginning?

- A) M B) O C) K D) N E) L

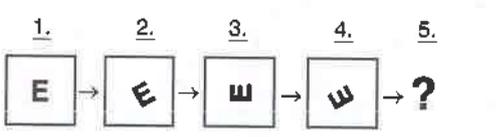
6. 

A B C D E

Yukarıdaki şekiller sıraya konulursa 3. şekil hangisi olur?

Which figure is the 3rd if all figures above are put in order?

- A) C B) D C) E D) A E) B

8. 

1. 2. 3. 4. 5.

A)  B)  C) 

D)  E) 

1. ?

1. 2. 3. 4.

A) B) C)

D) E)

3. ?

A) B) C)

D) E)



2. ?

A) B) C)

D) E)

4. ??????

A) B)

C) D)

E)

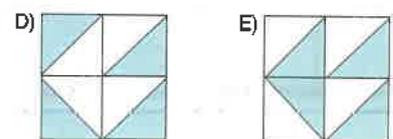
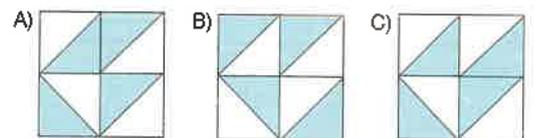
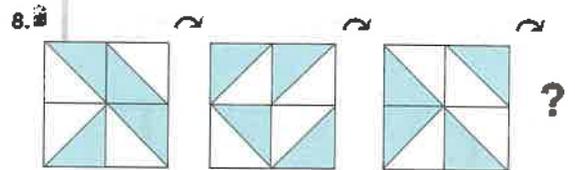
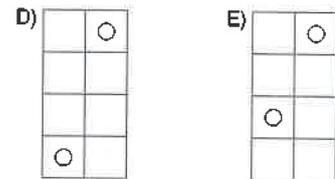
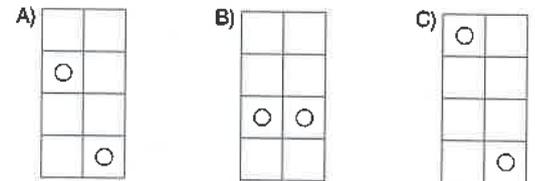
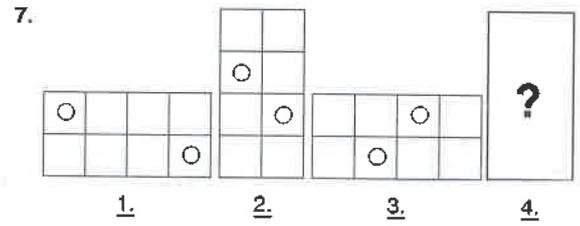
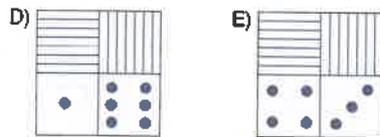
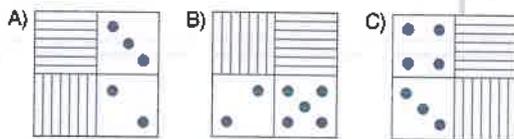
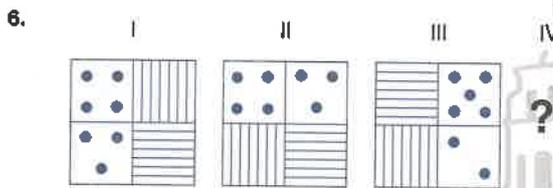
5. $|||| + || + \square || + \dots$

dizisinin devamında aşağıdakilerden hangisi gelmelidir?

Which of the following should come to complete the sequence above?

A) $||\square|$ B) $| \square \#$ C) $| + \square$

D) $\square | +$ E) $\square \# |$



1. 1. 2. 3. 4. ?

○	▽
☆	

▽	□
○	

□	☆
▽	

A)

○	▽
☆	

 B)

□	▽
○	

 C)

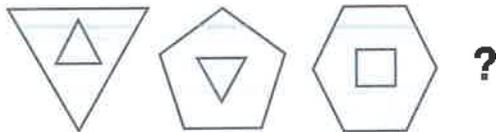
☆	○
□	

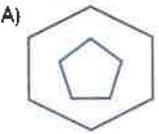
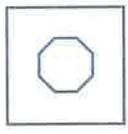
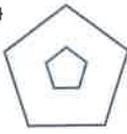
D)

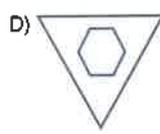
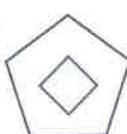
☆	□
▽	

 E)

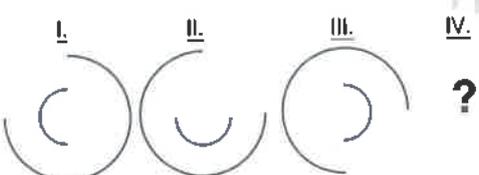
□	○
▽	

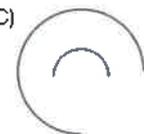
3. 

A)  B)  C) 

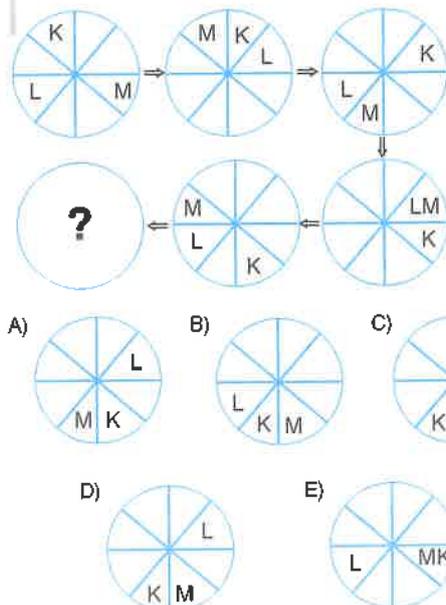
D)  E) 

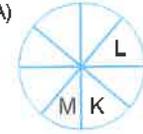
2. I. II. III. IV. ?



A)  B)  C) 

D)  E) 

4. 

A)  B)  C) 

D)  E) 

5.

A) B) C) D) E)

7.

I.

+	+	♣
+	♣	+
♣	+	+

 II.

♣	+	+
+	+	♣
+	♣	+

 III.

+	♣	+
♣	+	+
+	+	♣

 IV. ?

A)

+	+	♣
+	♣	+
+	♣	+

 B)

♣	+	+
+	♣	+
+	+	♣

 C)

+	+	♣
+	♣	+
♣	+	+

D)

+	+	♣
♣	+	+
+	♣	+

 E)

+	♣	+
+	+	♣
♣	+	+

6.

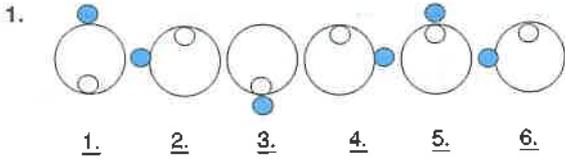
1. 2. 3. 4. ?

A) B) C) D) E)

8.

?

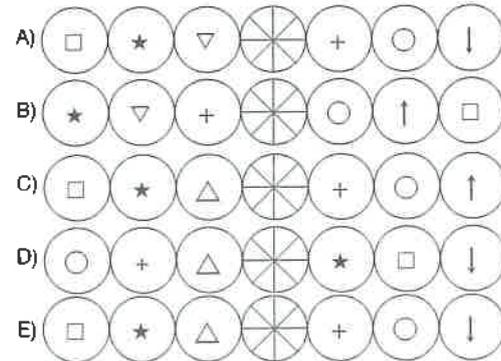
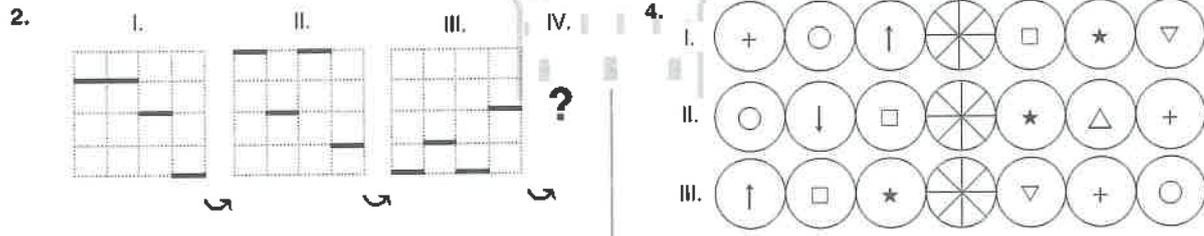
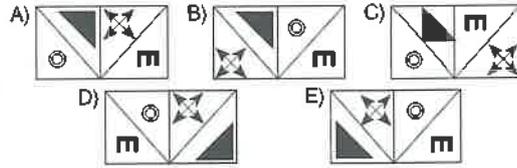
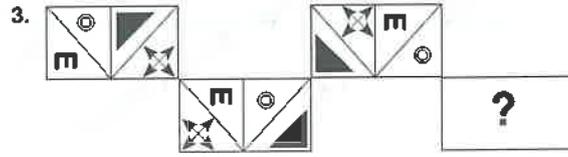
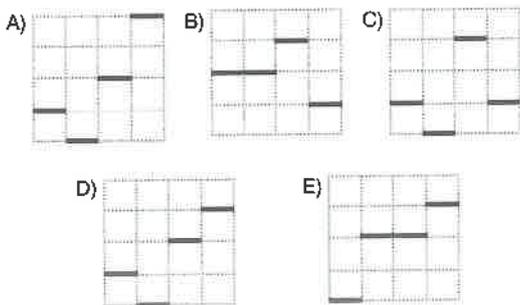
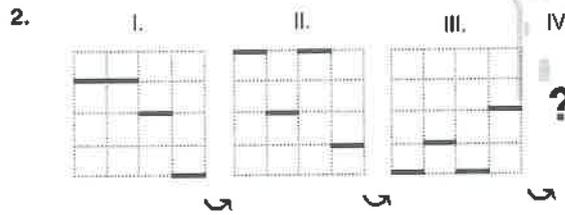
A) B) C) D) E)

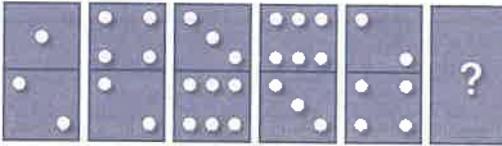


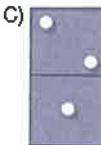
Hangisi yukarıdaki dizinin sıralamasını bozar?

Which figure violates the order of sequence above?

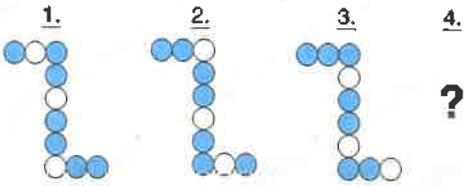
- A) 2. B) 3. C) 4.
D) 5. E) 6.

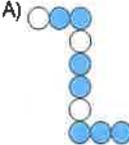
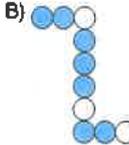
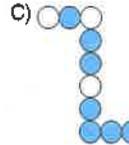


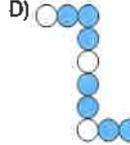
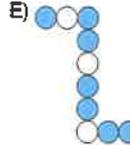
5. 

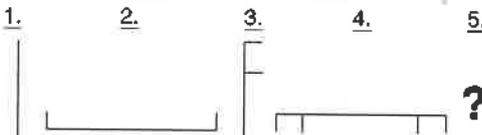
A)  B)  C) 

D)  E) 

7. 

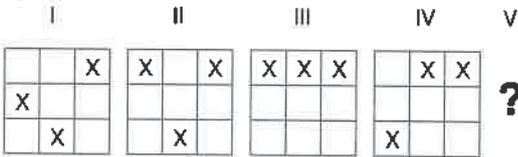
A)  B)  C) 

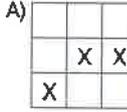
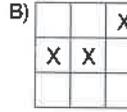
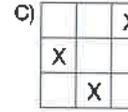
D)  E) 

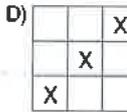
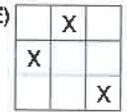
6. 

A)  B)  C) 

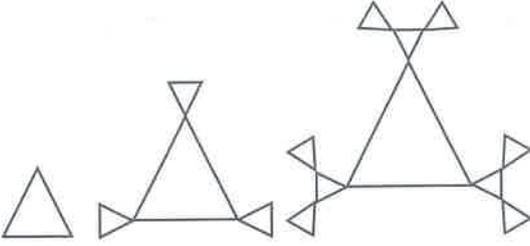
D)  E) 

8. 

A)  B)  C) 

D)  E) 

1.



Yukarıda ilk üç adımı verilen örüntünün 5. adımındaki üçgen sayısı kaçtır?

How many triangles are there in the 5th step if the first three steps are already shown?

- A) 22 B) 34 C) 46
D) 52 E) 58

2.



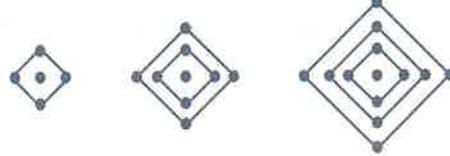
Adım 1 Adım 2 Adım 3
Step 1 Step 2 Step 3

Yukarıdaki şekil örüntüsü devam ettirildiğinde 6. adımda kaç çember elde edilir ?

How many circles will be formed in the 6th step of the pattern above?

- A) 13 B) 40 C) 121
D) 243 E) 364

3.



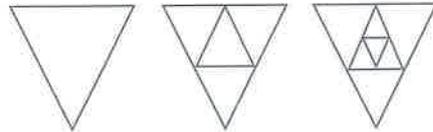
Adım 1 Adım 2 Adım 3
Step 1 Step 2 Step 3

Yukarıdaki şeklin 10. adımında kaç nokta vardır?

How many points are there in the 10th step?

- A) 29 B) 33 C) 37
D) 41 E) 45

4.

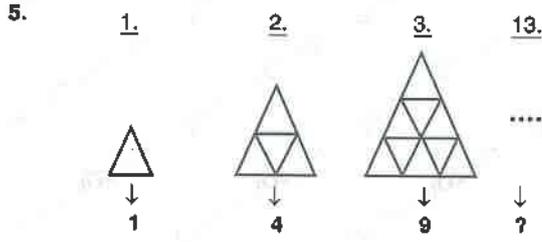


Adım I Adım II Adım III
Step I Step II Step III

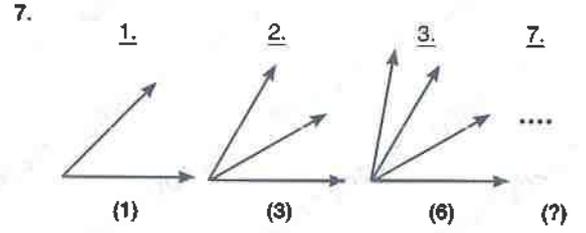
Yukarıdaki şekle göre, adım VIII'de kaç üçgen vardır?

How many triangles are there in step VIII?

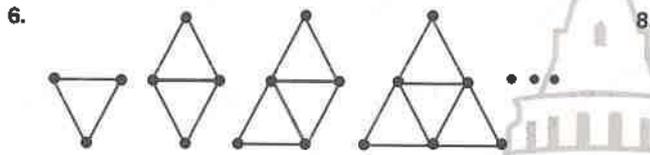
- A) 21 B) 25 C) 29
D) 33 E) 37



- A) 96 B) 121 C) 133
D) 144 E) 169



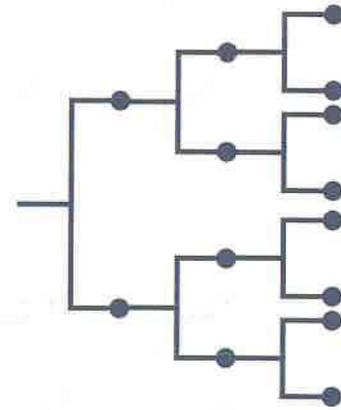
- A) 12 B) 15 C) 21
D) 28 E) 32



Kibrit sayısı Number of matches	3	5	7	9	...	23	...	y
Üçgen sayısı Number of triangles	1	2	3	4	...	x	...	42

$$x + y = ?$$

- A) 84 B) 87 C) 94
D) 96 E) 102



Yukarıda 3. adımı verilen örüntünün 6. adımında toplam kaç tane vardır ?

If the 3rd step is shown above, how many are there in the 6th step?

- A) 15 B) 34 C) 63
D) 108 E) 127

1. 1. 2. 3. 4. 5. ?

A) B) C) D) E)

3. I. II. III. IV. V. ?

A) B) C) D) E)

2. I II III ?

Soru işareti (?) yerine aşağıdakilerden hangisi gelmelidir?
Which one of the following should replace the question (?) mark?

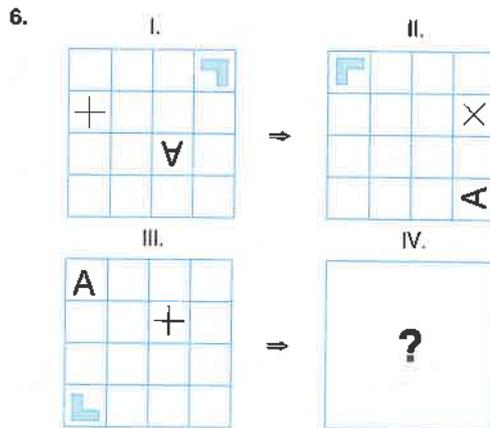
A) B) C) D) E)

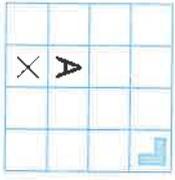
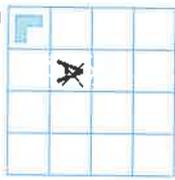
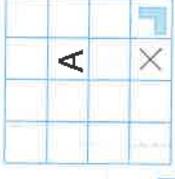
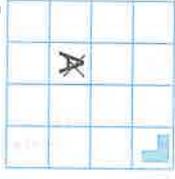
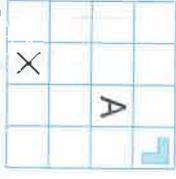
4. ?

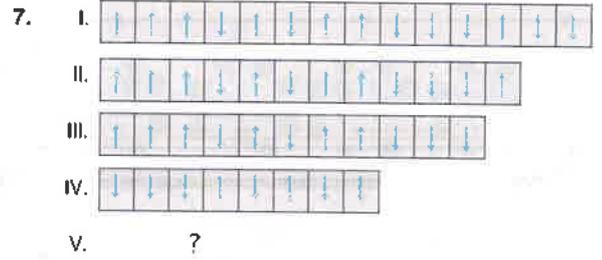
A) B) C) D) E)

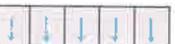
5. 1. ○ ☆ ▢ ▽ ⊕ ◇
 2. ◇ ☆ ▢ ▽ ⊕ ○
 3. ◇ ⊕ ▢ ▽ ☆ ○
 4. ◇ ⊕ ▽ ▢ ☆ ○
 5. ○ ⊕ ▽ ▢ ☆ ◇
 ⋮
 30. ???????

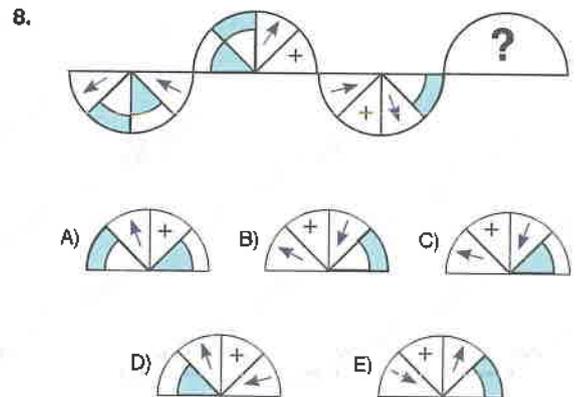
- A) ◇ ☆ ▢ ▽ ⊕ ○ B) ◇ ⊕ ⊕ ▽ ☆ ○
 C) ◇ ⊕ ▽ ▢ ☆ ○ D) ○ ⊕ ▽ ▢ ☆ ◇
 E) ○ ☆ ▽ ▢ ⊕ ◇



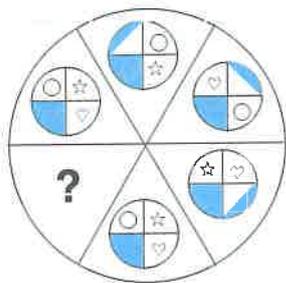
- A)  B) 
- C)  D) 
- E) 



- A)  B) 
- C)  D) 
- E) 

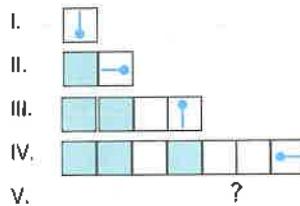


1.



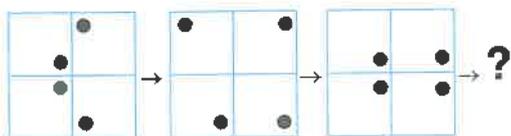
- A)
- B)
- C)
- D)
- E)

3.



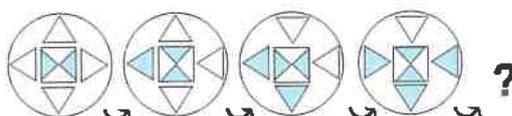
- A)
- B)
- C)
- D)
- E)

2.



- A)
- B)
- C)
- D)
- E)

4.



- A)
- B)
- C)
- D)
- E)

5.

A)

		B
A	C	

 B)

		A
B	C	

 C)

AB	C	

D)

		A
B	C	

 E)

BA	C	

7.

A)

 B)

 C)

D)

 E)

6.

A)

 B)

 C)

D)

 E)

8.

A)

L	O
B	M
K	N

 B)

L	O
N	M
B	K

 C)

L	M
O	B
K	N

D)

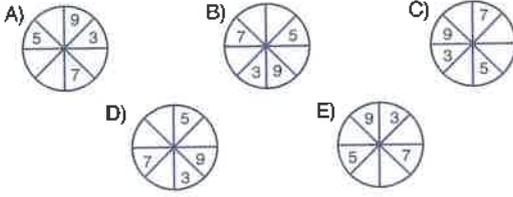
B	L
K	M
N	O

 E)

N	M
K	B
L	O

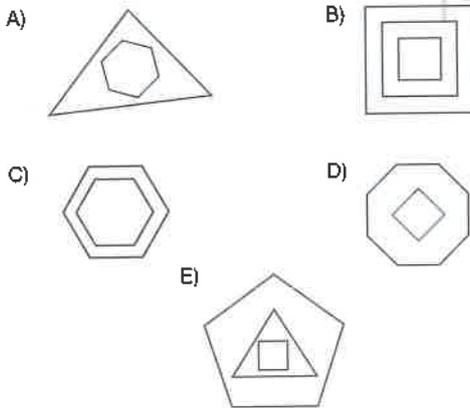
1. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



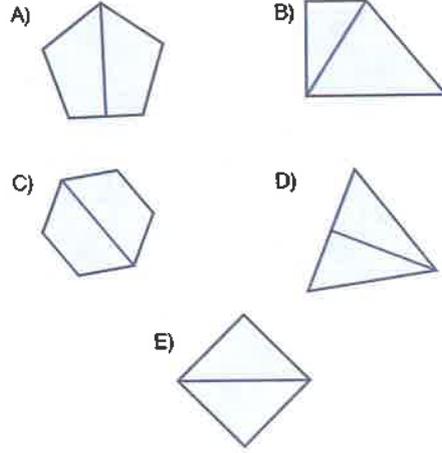
2. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



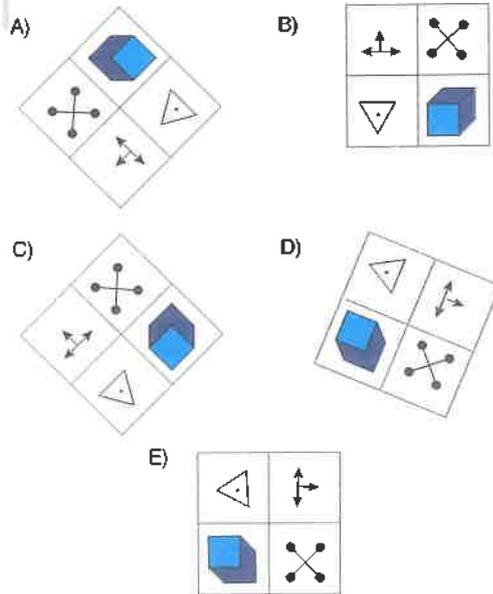
3. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



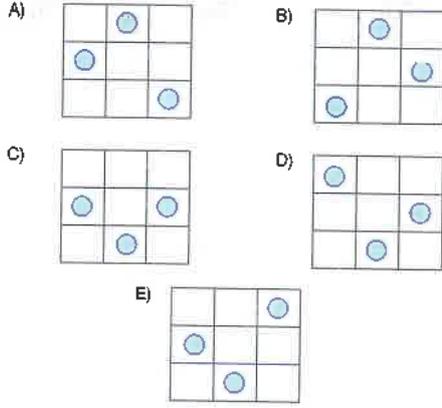
4. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



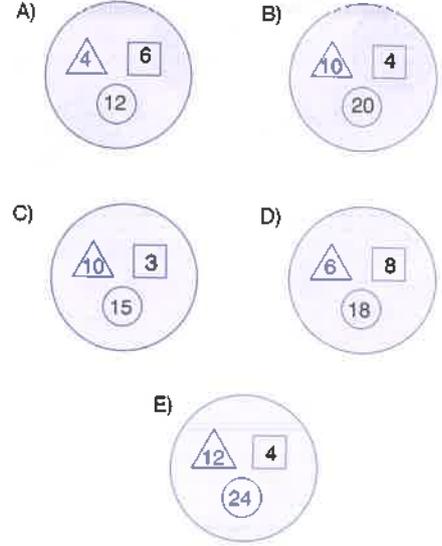
5. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



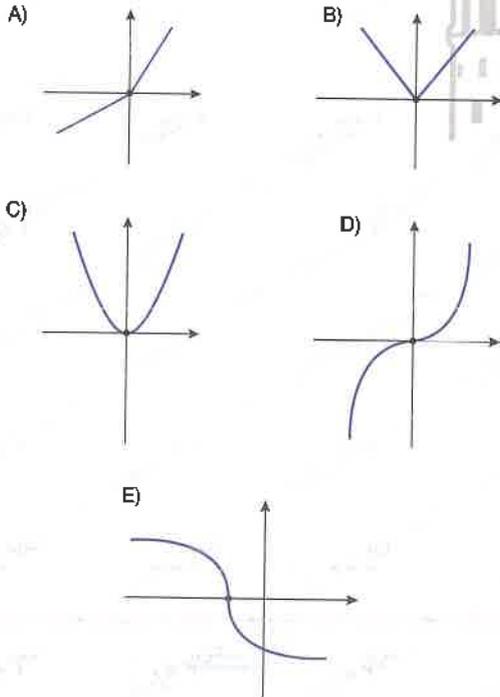
7. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



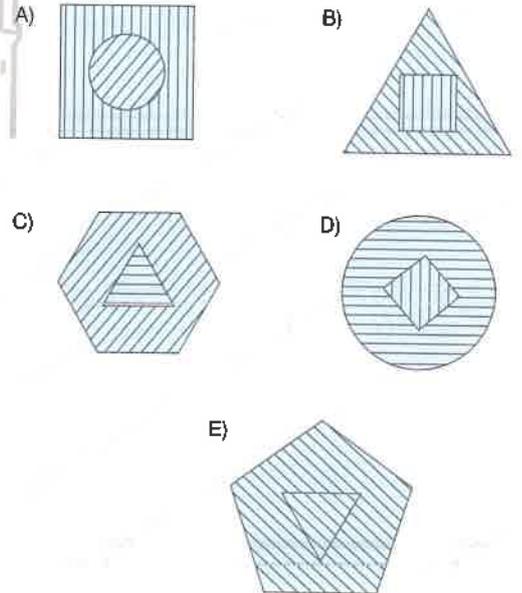
6. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



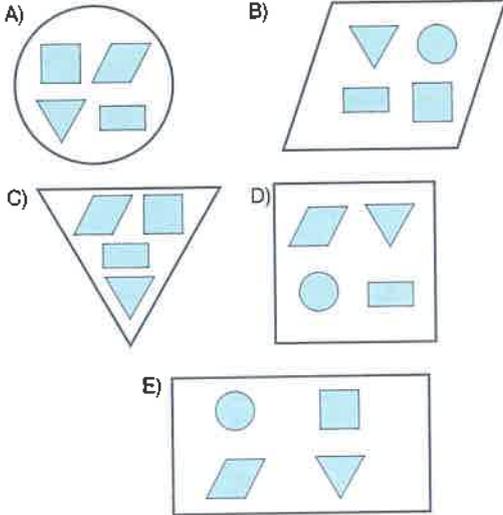
8. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



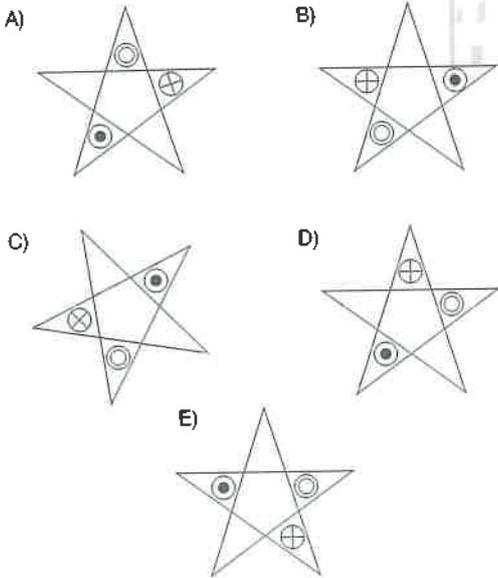
1. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



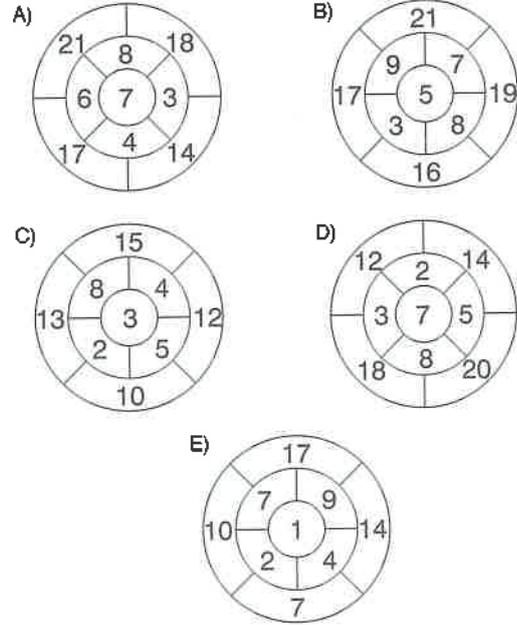
2. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



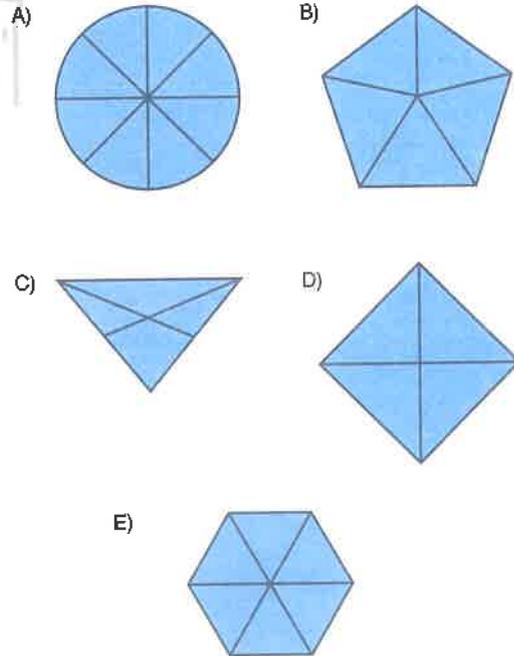
3. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



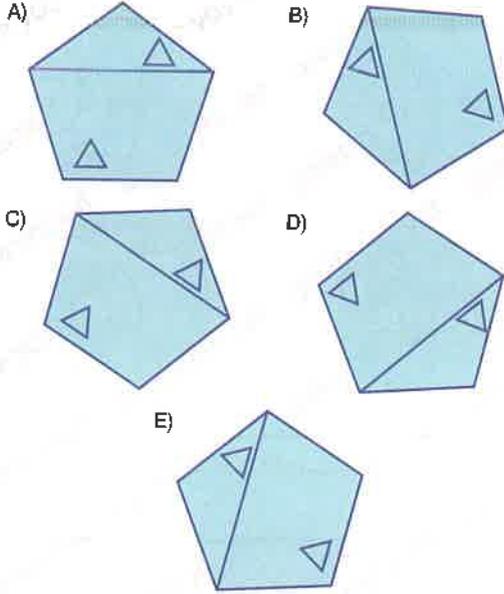
4. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



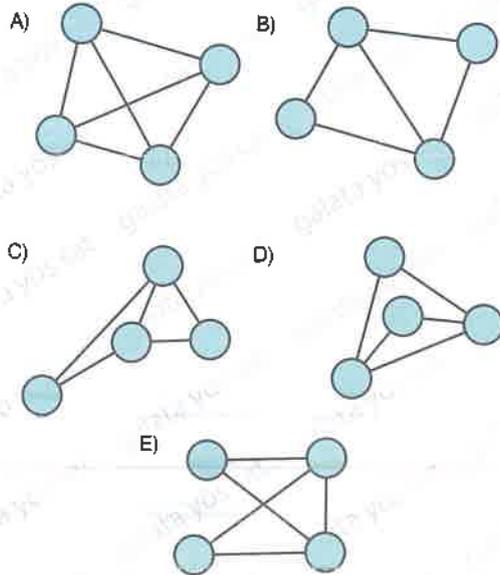
5. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



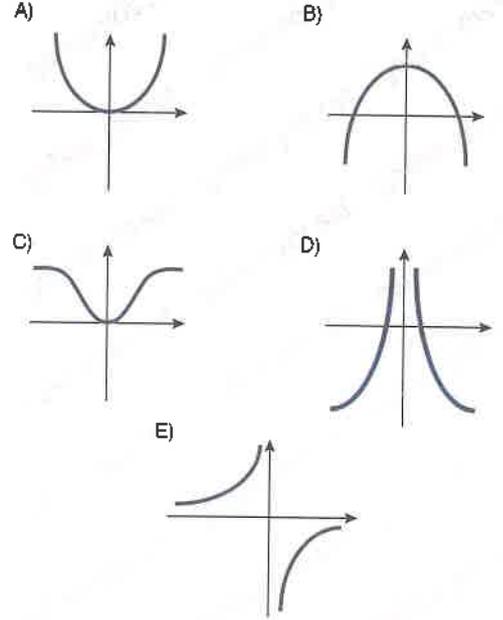
6. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



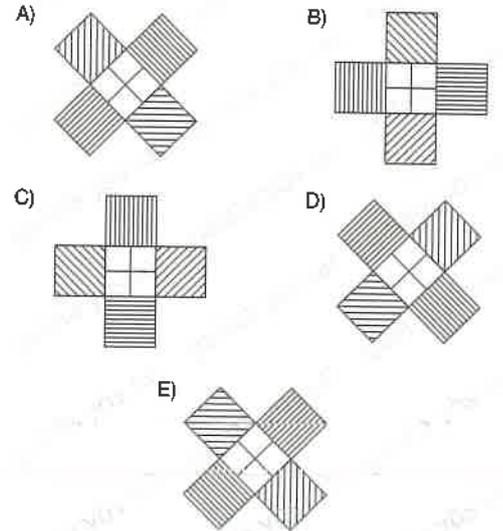
7. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



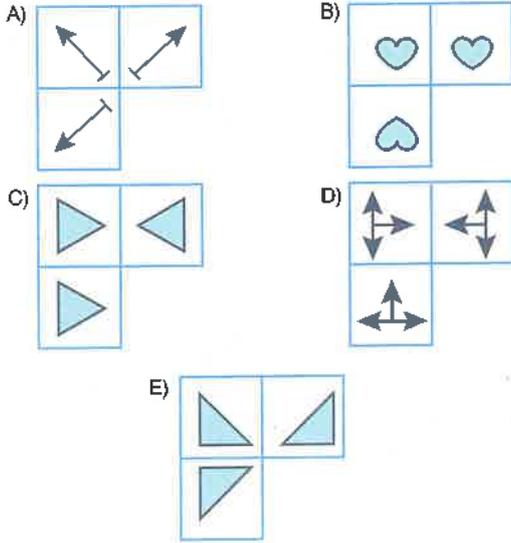
8. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



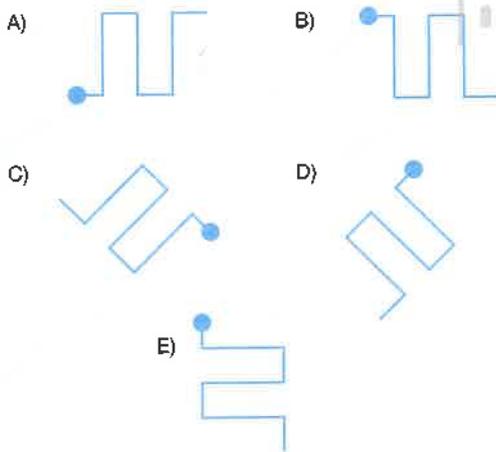
1. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



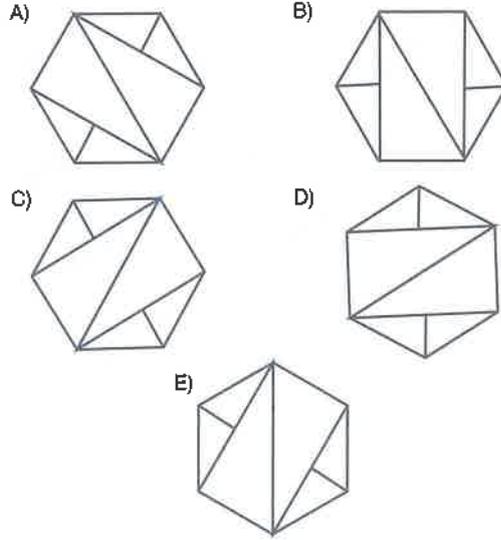
2. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



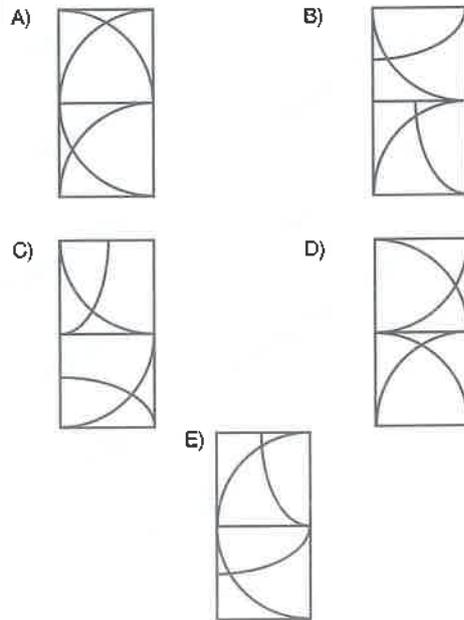
3. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



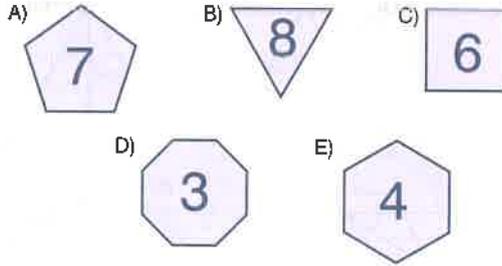
4. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



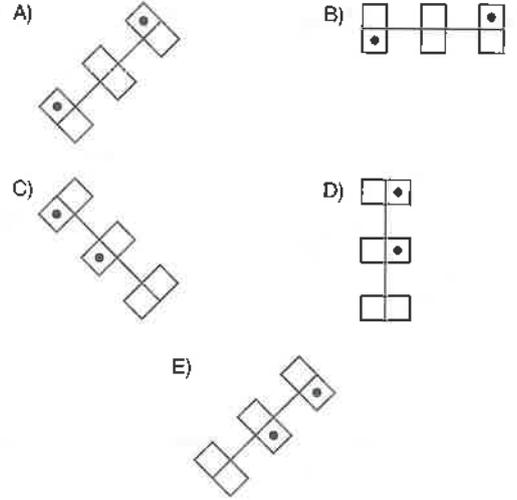
5. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



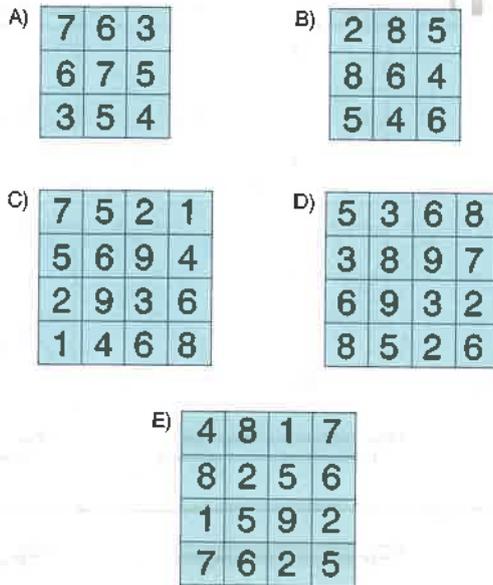
7. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



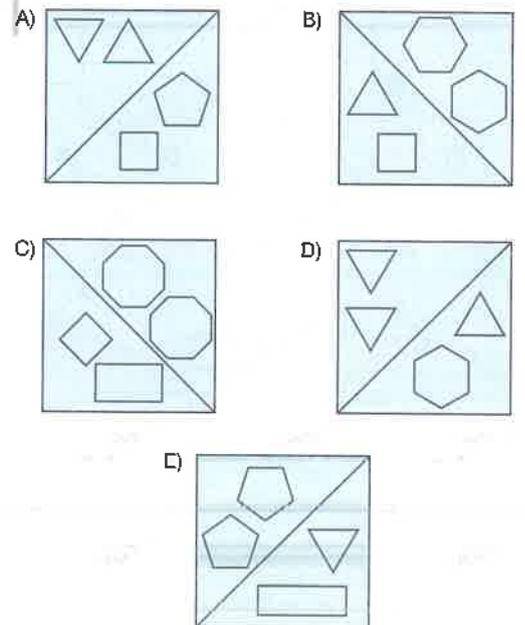
6. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



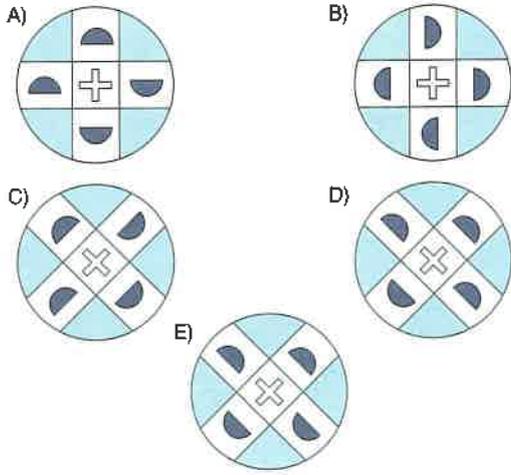
8. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



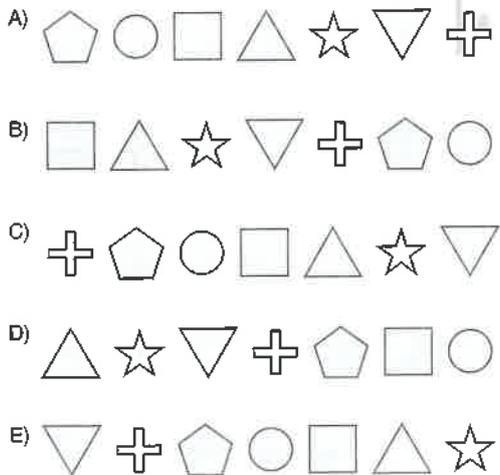
1. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



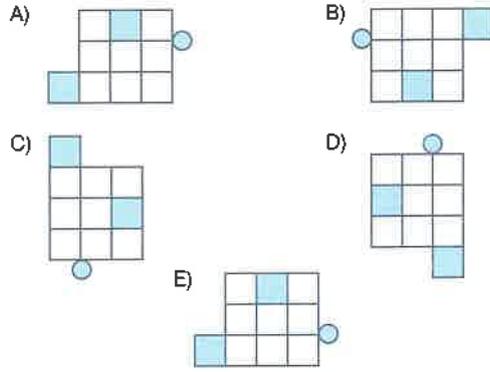
2. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



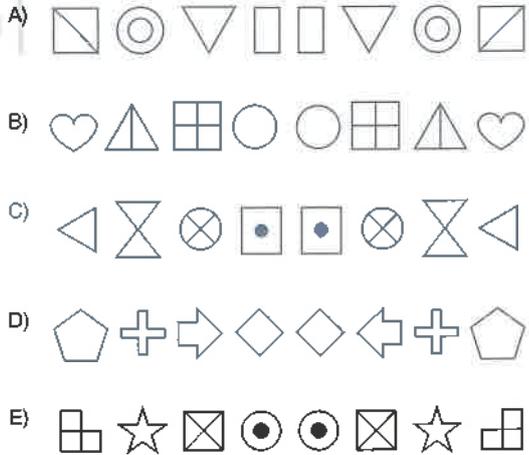
3. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



4. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

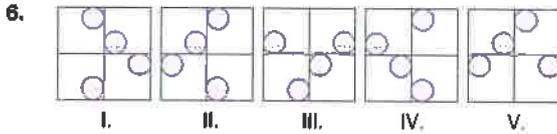
Which of the following figures is different from the others?



5. Aşağıdaki sayılardan hangisi diğerlerinden farklıdır?

Which of the following numbers is different from the others?

- A) 146 B) 444 C) 555 D) 842 E) 931



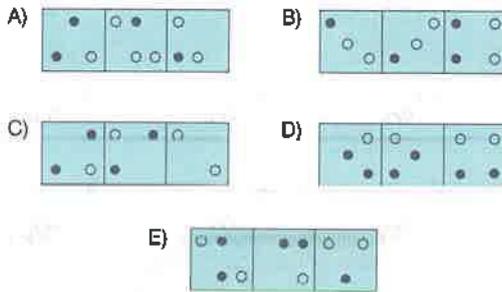
Hangisi farklıdır?

Which one is different?

- A) I B) II C) III D) IV E) V

7. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

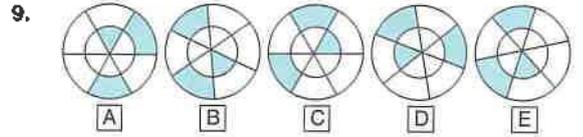
Which of the following figures is different from the others?



8. Aşağıdaki sayılardan hangisi diğerlerinden farklıdır?

Which of the following numbers is different from the others?

- A) 2416 B) 3327 C) 4364
D) 5475 E) 7249



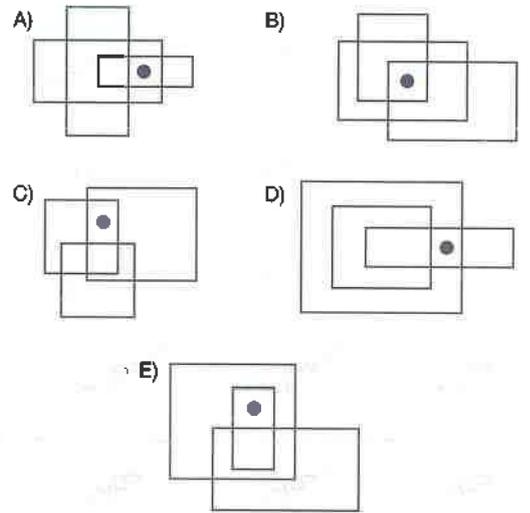
Hangisi farklıdır?

Which one is different?

- A) A B) B C) C D) D E) E

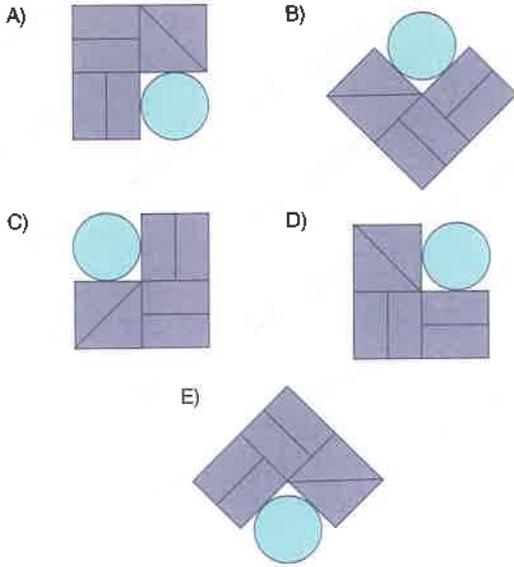
10. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



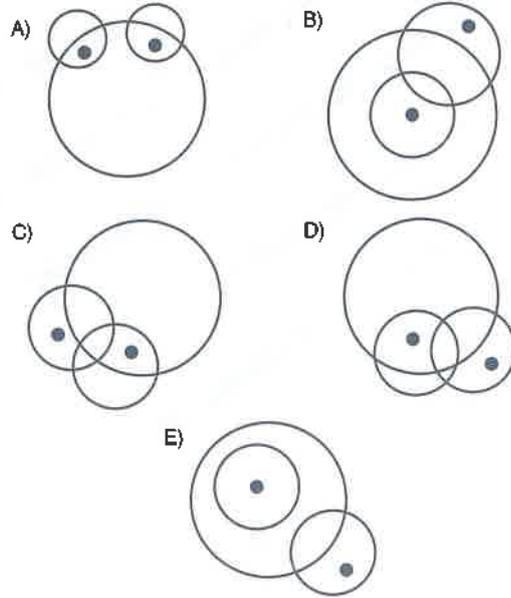
1. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



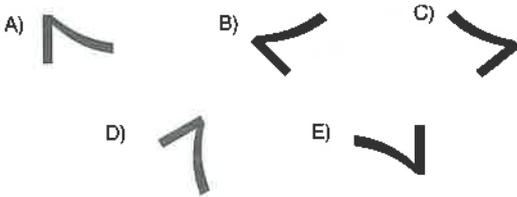
3. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



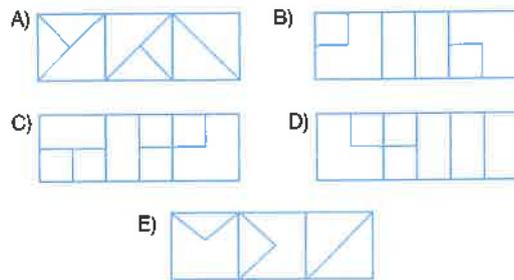
2. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



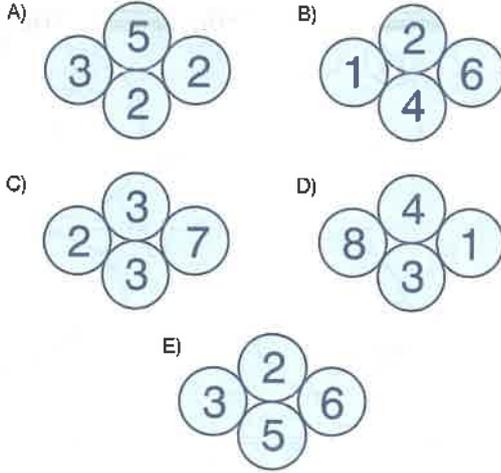
4. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



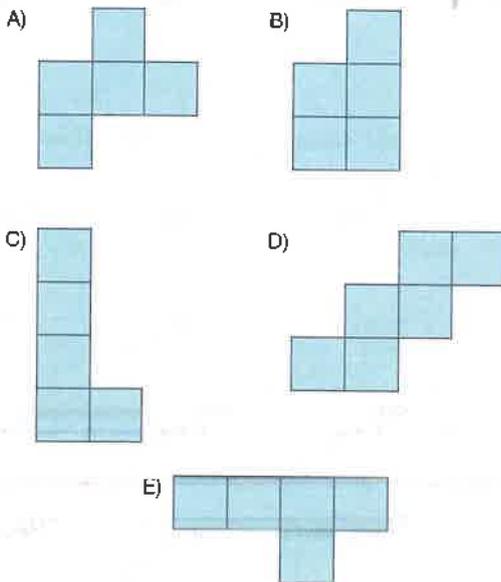
5. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



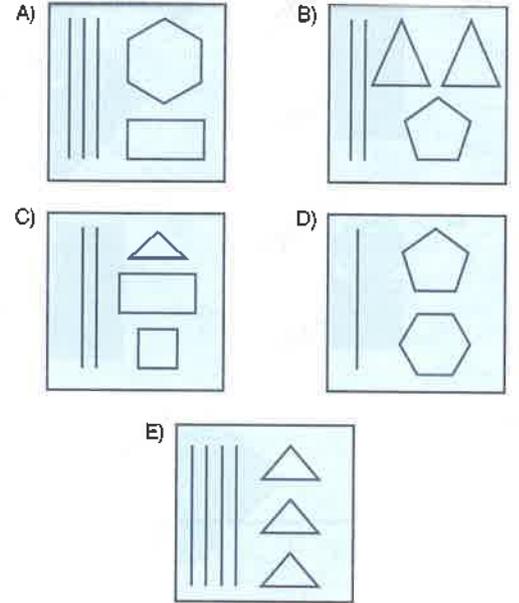
6. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?



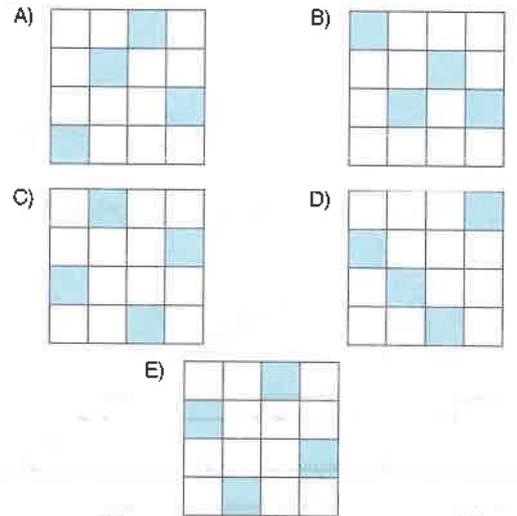
7. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

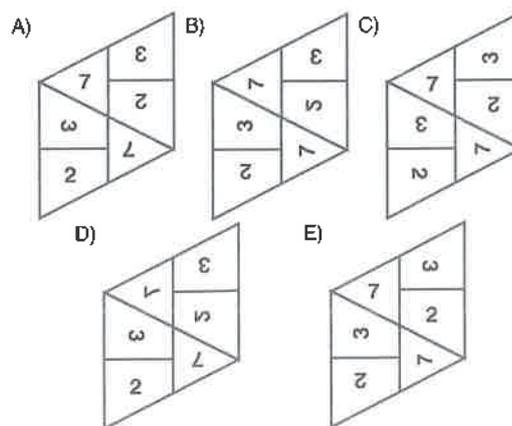
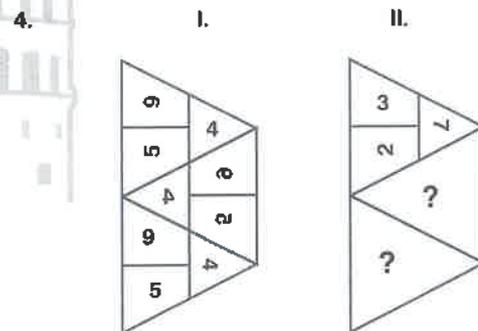
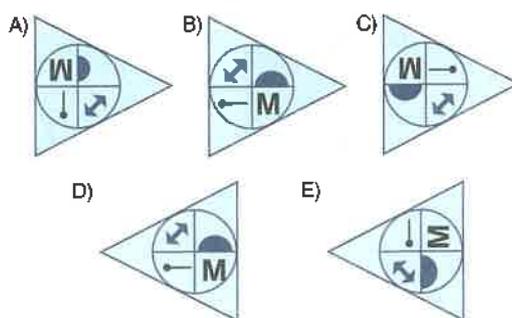
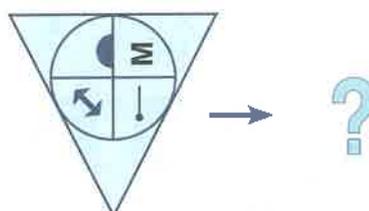
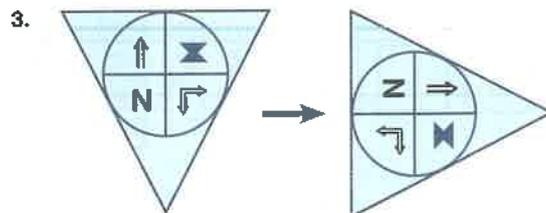
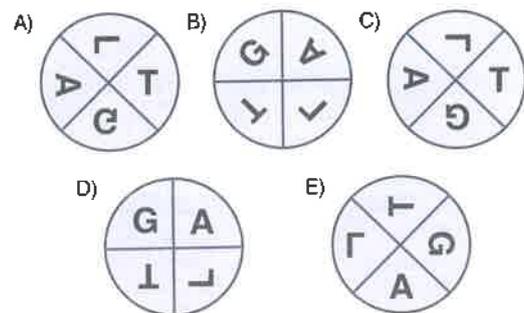
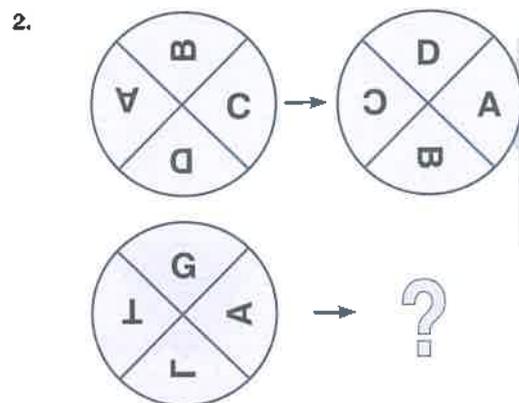
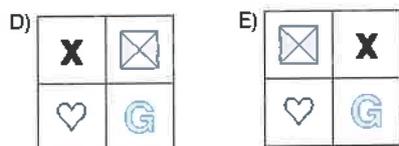
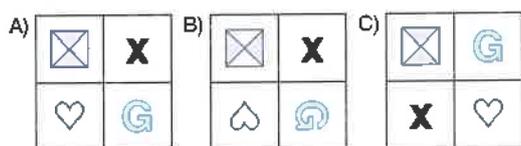
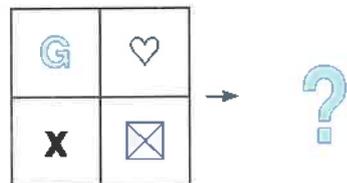
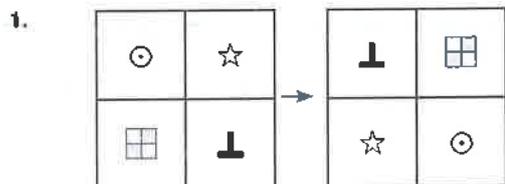
Which of the following figures is different from the others?



8. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which of the following figures is different from the others?





5.

K	L	M	N
---	---	---	---

 \rightarrow

⋈	⌒
⊖	⊎

G	L	T	A
---	---	---	---

 \rightarrow ?

 A)

⊖	⌒
⌒	⊎

 B)

⊖	⌒
⌒	⊎

 C)

⊖	⌒
⌒	⊎

 D)

⊖	⌒
⌒	⊎

 E)

⊖	⌒
⌒	⊎

7.

A)
 B)
 C)
 D)
 E)

6.

1	2
4	3

 \rightarrow

8	2
6	4

 $:$

2	3
7	5

 \rightarrow ?

 A)

17	3
7	6

 B)

12	4
10	8

 C)

14	4
10	6

 D)

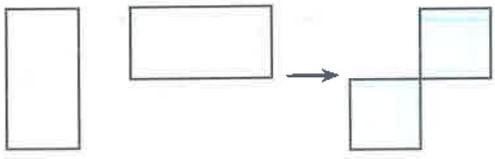
6	10
4	14

 E)

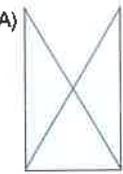
12	10
4	8

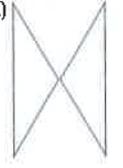
8.

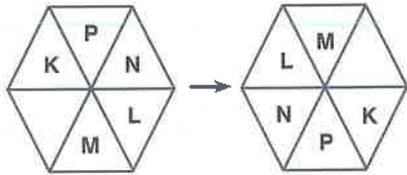
A)
 B)
 C)
 D)
 E)

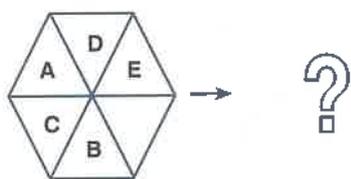
1. 

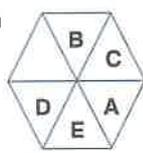


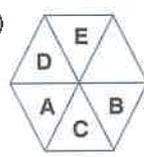
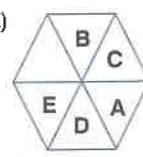
A)  B)  C) 

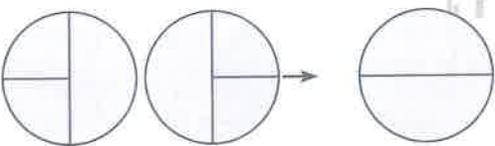
D)  E) 

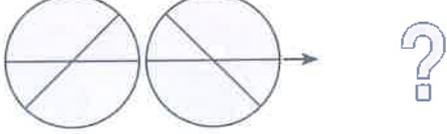
3. 

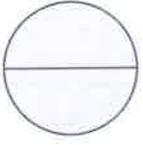
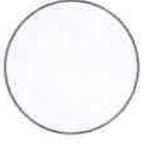


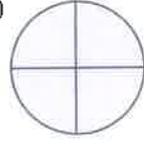
A)  B)  C) 

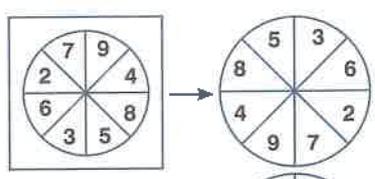
D)  E) 

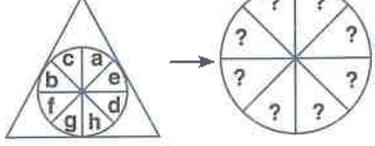
2. 

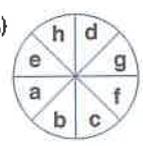
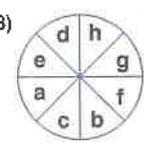
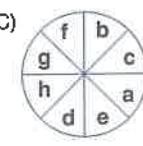


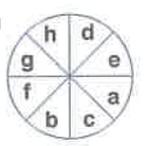
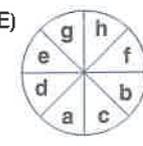
A)  B)  C) 

D)  E) 

4. 



A)  B)  C) 

D)  E) 

5.

A) B) C) D) E)

7.

A) B) C) D) E)

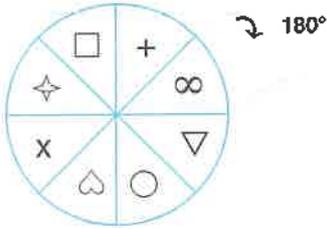
6.

A) B) C) D) E)

8.

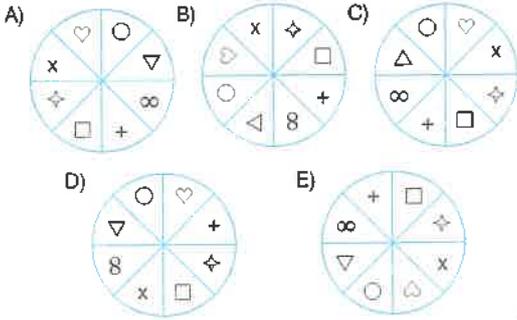
A) B) C) D) E)

1.

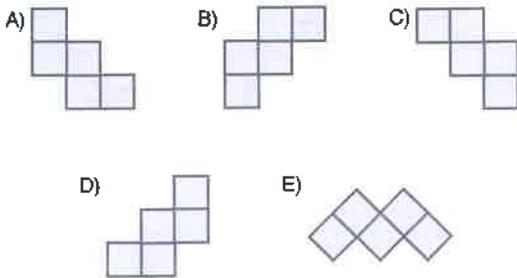
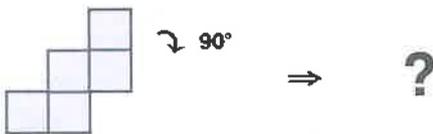


Yukarıdaki şekil saat yönünde 180° döndürülürse aşağıdakilerden hangisi elde edilir ?

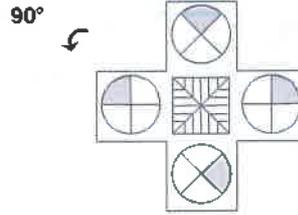
Which of the following shapes will be obtained if the given figure above is rotated 180° clockwise?



2.

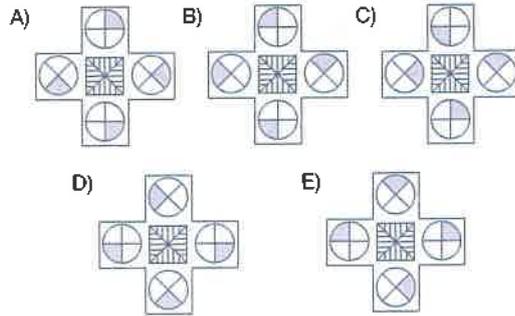


3.

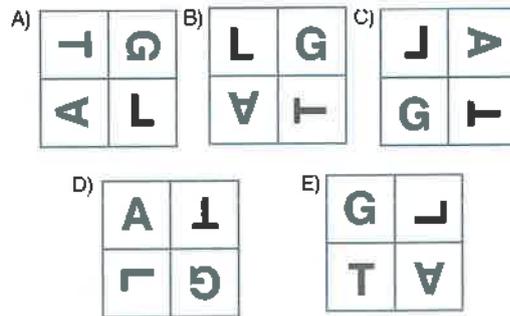


Yukarıdaki şekil saatin tersi yönünde 90° döndürülürse aşağıdakilerden hangisi elde edilir?

Which of the following shapes will be obtained if the given figure above is rotated 90° counterclockwise?



4.



TEST 3

Şekil Karşılaştırma / Figure Comparison

5. 240° \Rightarrow ?

A) B) C) D) E)

7. 45° \Rightarrow ?

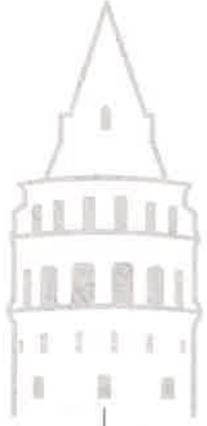
A) B) C) D) E)

6. 120° \Rightarrow ?

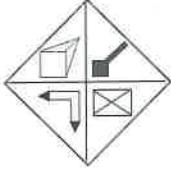
A) B) C) D) E)

8. 90° \Rightarrow ?

A) B) C) D) E)

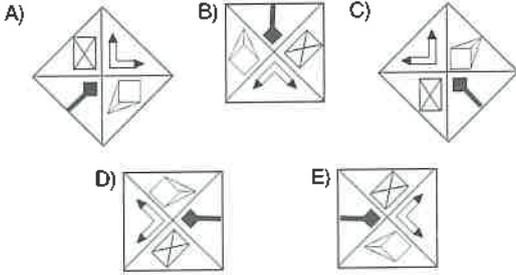


1.



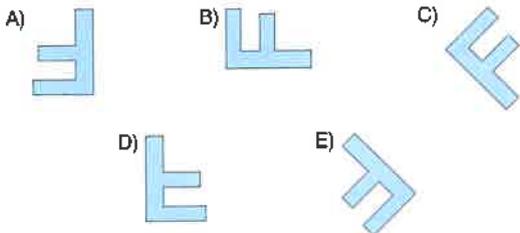
Aşağıdakilerden hangisi yukarıdaki şeklin döndürülmüş halidir?

Which one of the following is the rotated form of the figure given above?

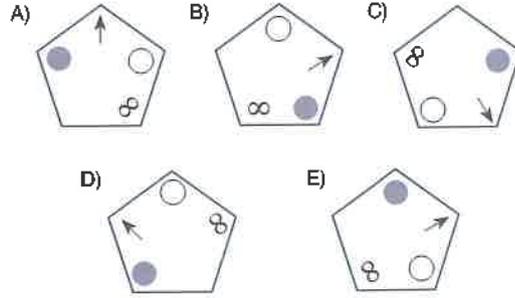
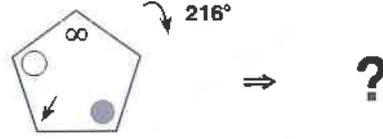


2. Aşağıdakilerden hangisi "F" harfinin saat yönünde döndürülmüş bir hali değildir?

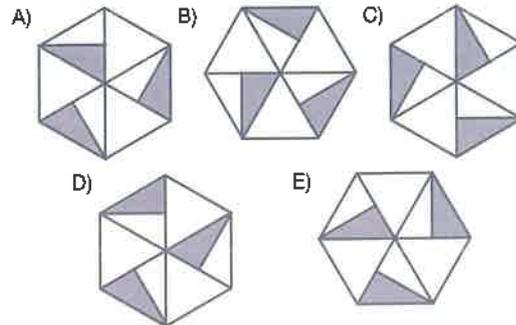
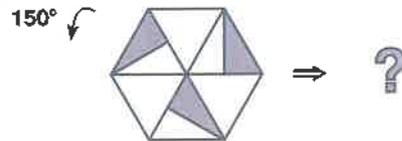
Which one of the following is not the rotated form of the letter "F" clockwise?



3.



4.



5.

yarıçap = $8r$
(radius)

6r

A)

B)

C)

D)

E)

6.

270°

4r

12r

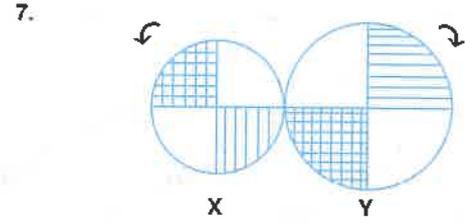
A)

B)

C)

D)

E)



Birbirine bağlı X ve Y çarkları verilmektedir. X çarkının yarıçapı ise $2r$ cm, Y çarkının yarıçapı ise $3r$ cm dir. Y çarkı bir tam turunu 36 saniyede tamamlıyor. Eğer Y çarkı, ok yönünde 18 saniye döndürülürse, çarkların son durumu aşağıdakilerden hangisi olur?

Wheel X and Y are connected to each other. The radius of the wheel X is $2r$ cm and the radius of the wheel Y is $3r$ cm. The wheel Y completes its one tour in 36 seconds. When the wheel Y is rotated for 18 seconds in the given direction, what will be the final position of these wheels?

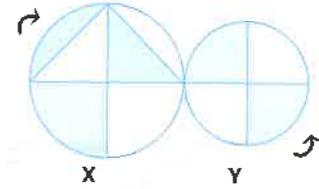
A)

B)

C)

D)

E)



x ve y çarklarının yarıçap uzunlukları sırasıyla 3 cm ve 1 cm dir. Y çarkı bir tam turunu 6 saniyede tamamlıyor. Eğer x çarkı, ok yönünde 9 saniye döndürülürse, çarkların son durumu aşağıdakilerden hangisi olur?

The radius of wheels X and Y are respectively 3 cm and 1 cm. The wheel Y completes its one tour in 6 seconds. When the wheel X is rotated for 9 seconds in the given direction, what will be the final position of these wheels?

A)

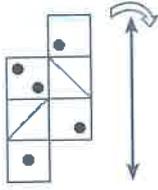
B)

C)

D)

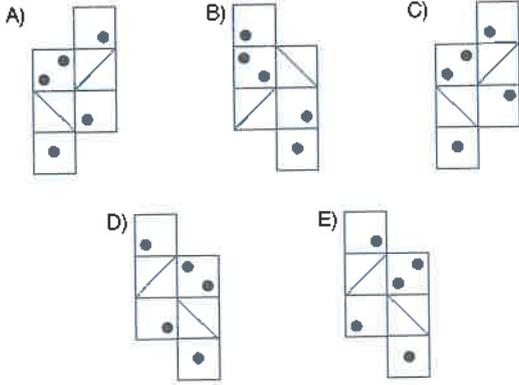
E)

1.

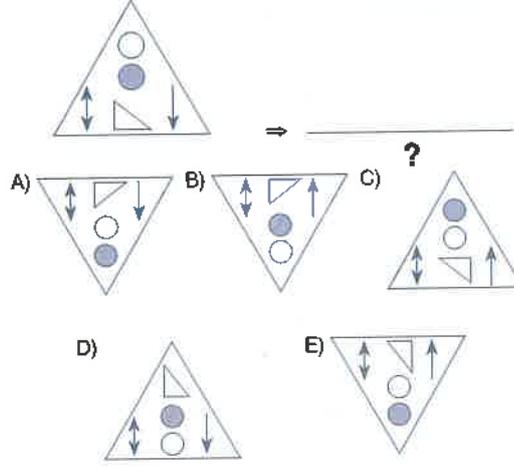
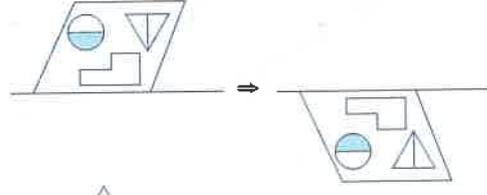


Yukarıdaki şeklin verilen eksene göre simetrik görüntüsü aşağıdakilerden hangisidir?

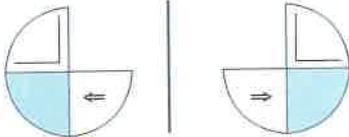
Which of the following is the symmetrical view of the figure above relative to the given axis?



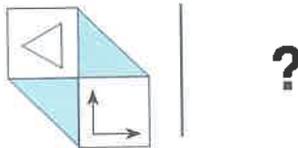
3.



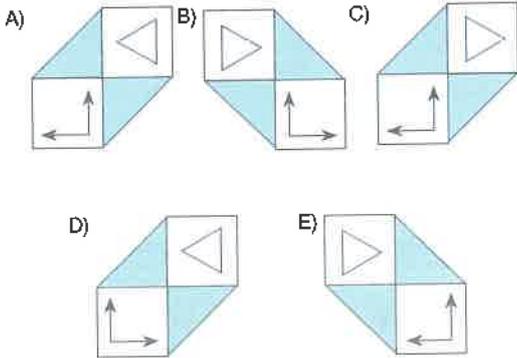
2. I.



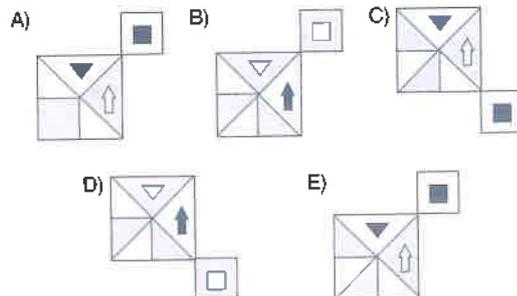
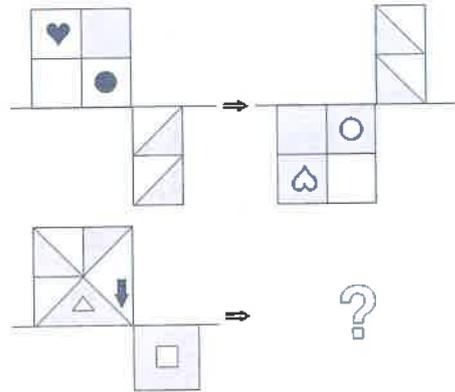
II.



?



4.

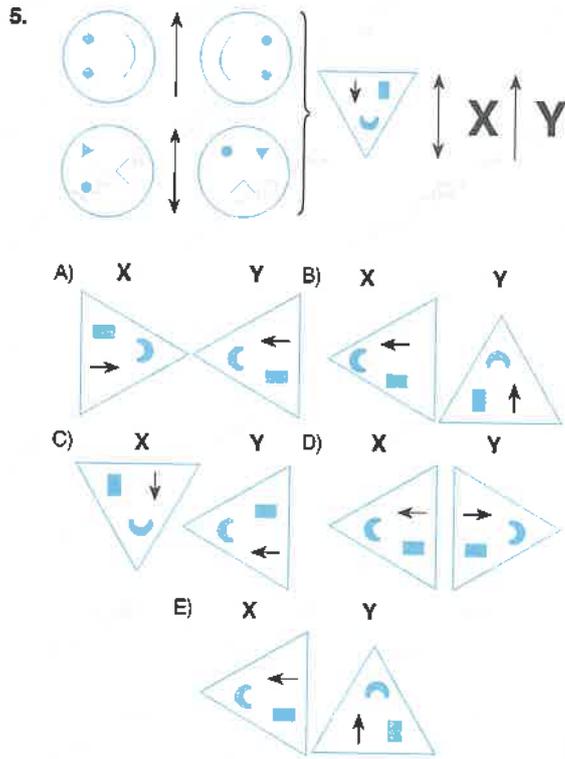


1 - E

2 - C

3 - B

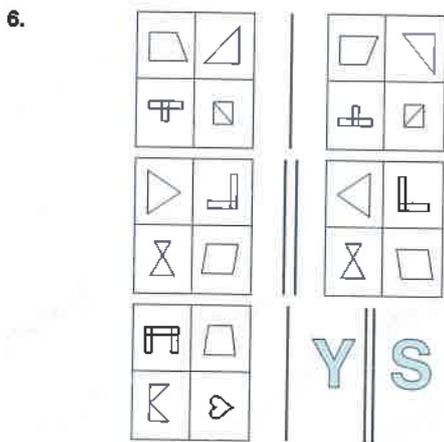
4 - E

5. 

A) X Y B) X Y

C) X Y D) X Y

E) X Y

6. 

Y S

A) Y S B) Y S

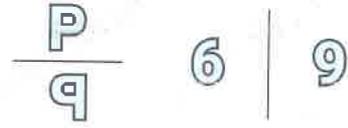
C) Y S D) Y S

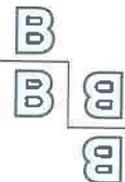
E) Y S

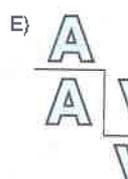
7. Aşağıdaki kurala uyan şekil hangisidir?

Which figure does hold the rule below?

Kural (Rule) :



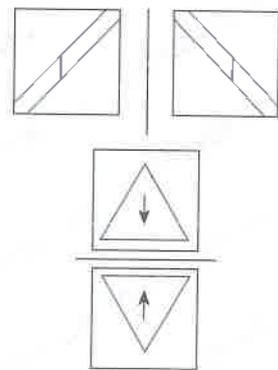
A)  B)  C) 

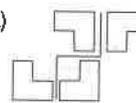
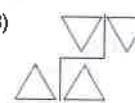
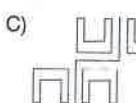
D)  E) 

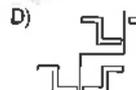
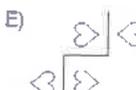
8. Aşağıdaki kurala uymayan şekil hangisidir?

Which figure does not hold the rule below?

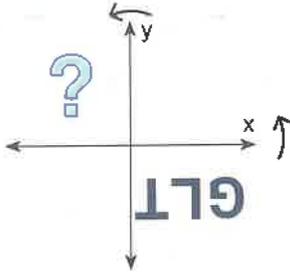
Kural (Rule):



A)  B)  C) 

D)  E) 

1.

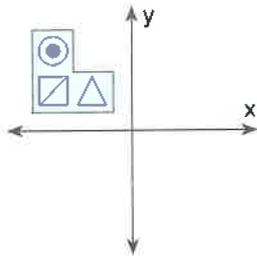


"LİĞ" yazısının önce x eksenine göre, sonrada y eksenine göre simetriği alındığında aşağıdaki sonuçlardan hangisi elde edilir?

Which of the following results is obtained when the word "LİĞ" is symmetrical first with respect to the x-axis and then with respect to the y-axis?

- A) TLG B) GJJ C) TİĞ
D) GLT E) LİĞ

2.

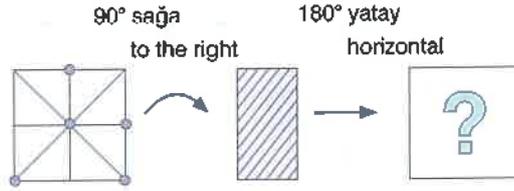


Yukardaki şeklin önce y eksenine göre simetriği alınıp, sonra da orijine göre simetriği alındığında aşağıdaki sonuçlardan hangisi elde edilir?

Which of the following results is obtained when the above figure is first symmetrical with respect to the y-axis and then symmetrical with respect to the origin?

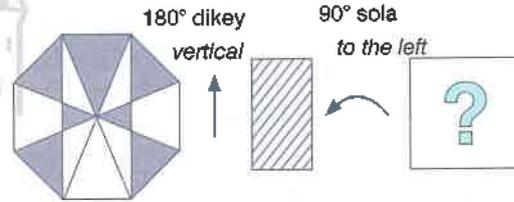
- A) B) C)
D) E)

3.



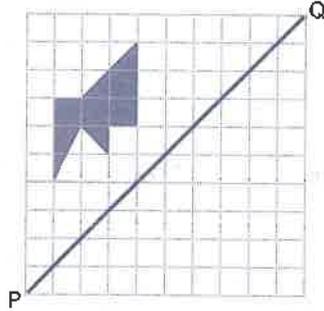
- A) B) C)
D) E)

4.



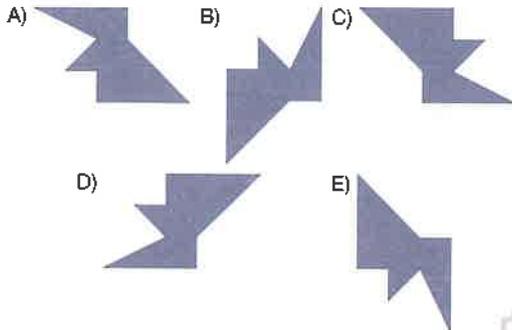
- A) B) C)
D) E)

5.



Boyalı şeklin PQ doğrusuna göre simetrik görüntüsü hangisidir?

What is the symmetrical view of the painted figure according to the PQ line?

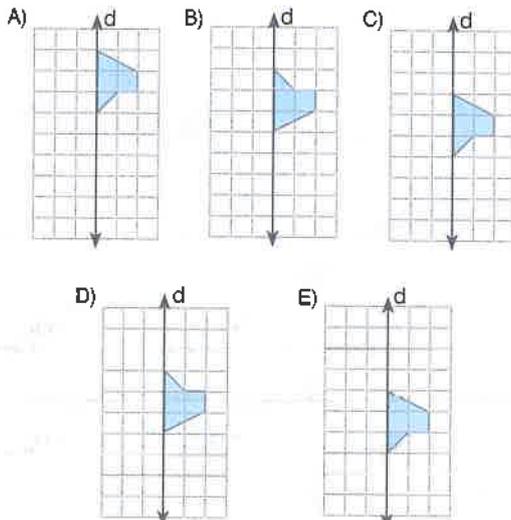


6.

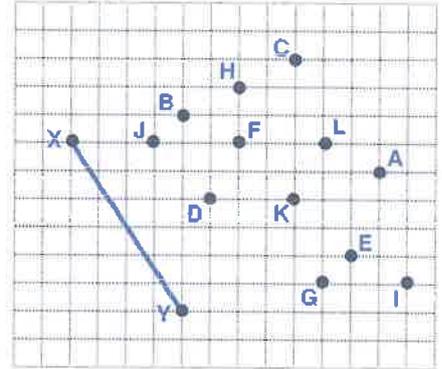


Yandaki şekil 3 birim yukarı ötelenip d doğrusuna göre, yansıması alındığında aşağıdaki şekillerden hangisi oluşur?

When the figure on the left is shifted up by 3 units and its projection is taken according to the line, which of the following figures is formed?



7.

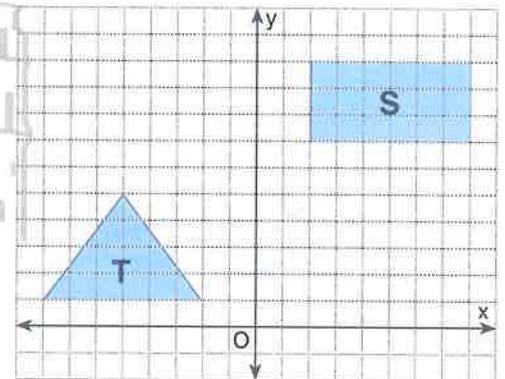


Yukarıdaki şekilde [XY]'nin D noktasına göre simetrisi olan doğru parçası hangisidir?

Which line segment is symmetrical to point D of [XY] in the figure above?

- A) [BG] B) [FG] C) [HE]
D) [FE] E) [HK]

8.

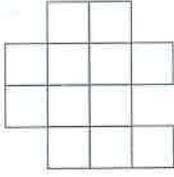


Yukarıdaki şekilde, T şekli 4 br yukarı ve S şekli y eksenine göre yansıtılırsa son durumda T ve S'nin kaç br^2 'lik alanları kesişir?

In the above figure, if the shape T is 4 u up and the S shape is projected with respect to the y-axis, how many u^2 areas of T and S intersect in the final case?

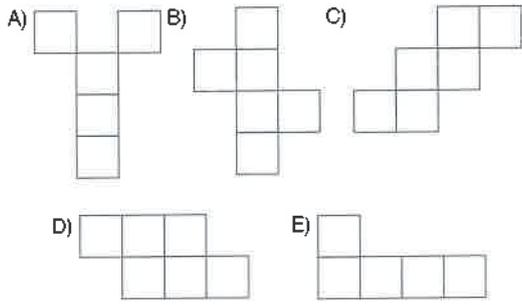
- A) 2 B) 3 C) 4 D) 1 E) 5

1.

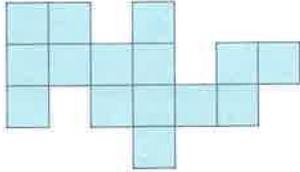


Yukarıdaki şeklin içinde aşağıdakilerden hangisi yoktur?

Which of the following is not included in the above figure?

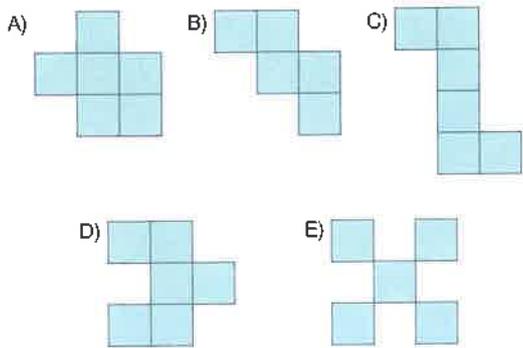


2.

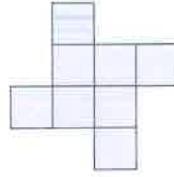


Yukarıdaki şeklin içinde aşağıdakilerden hangisi yoktur?

Which of the following is not included in the above figure?

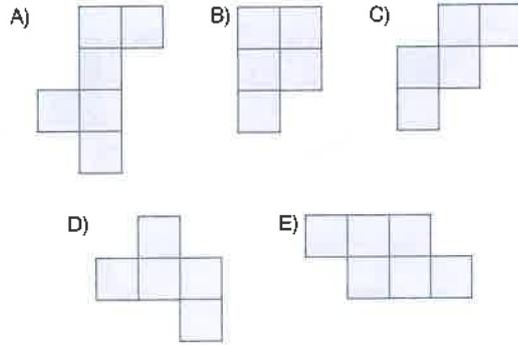


3.

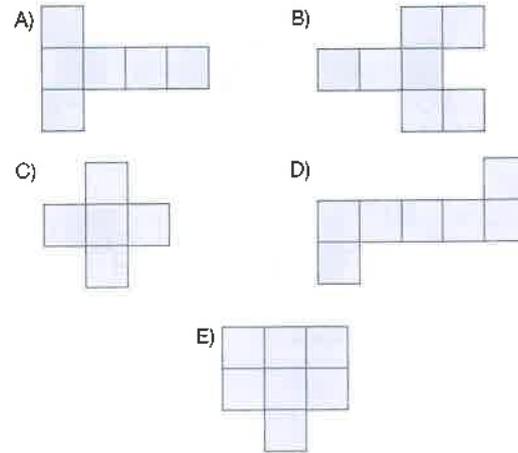
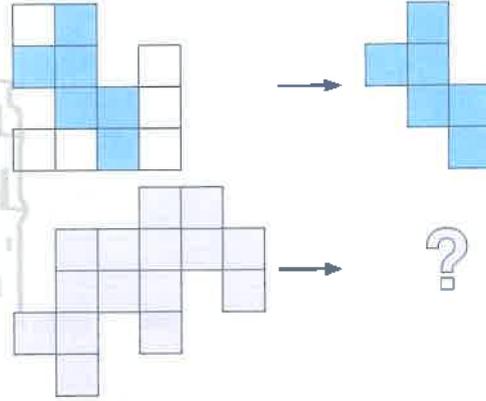


Yukarıdaki şeklin içinde aşağıdakilerden hangisi vardır?

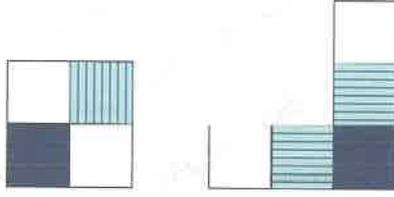
Which of the following is included in the above figure?



4.

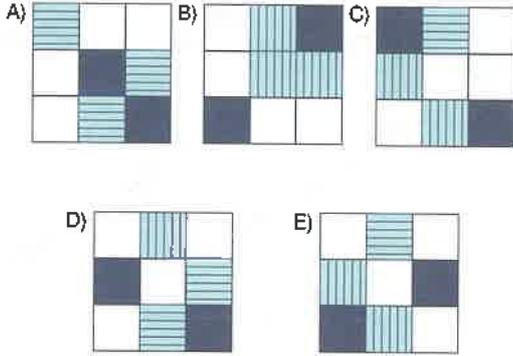


5.

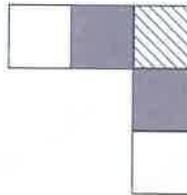
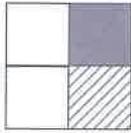


Aşağıdakilerden hangisi yukarıdaki iki şeklin birleşmesiyle oluşmaz?

Which of the following does not occur by combining the above two shapes?

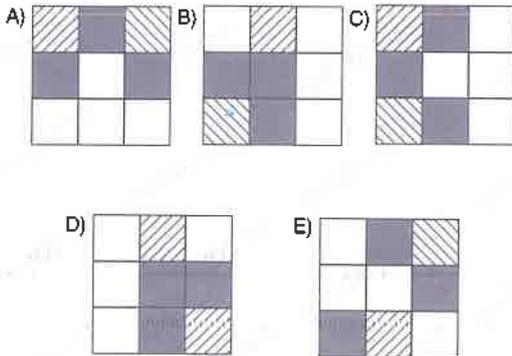


6.

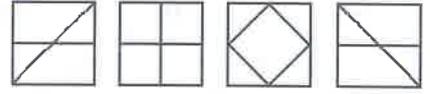


Aşağıdakilerden hangisi yukarıdaki iki şeklin birleşmesiyle oluşur?

Which of the following is formed by combining the above two shapes?

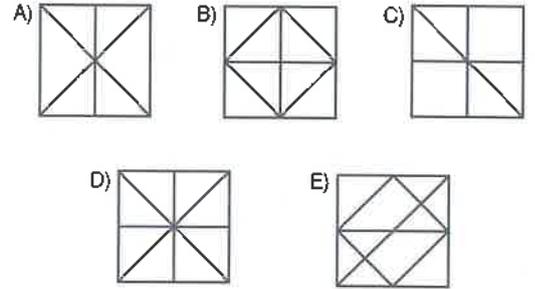


7.

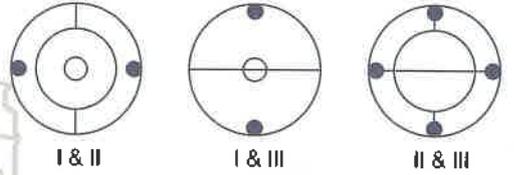


Yukarıdaki şekillerden herhangi ikisi üst üste getirildiğinde aşağıdaki figürlerden hangisi elde edilemez?

Which of the following figures cannot be obtained when any two of the above figures are superimposed?



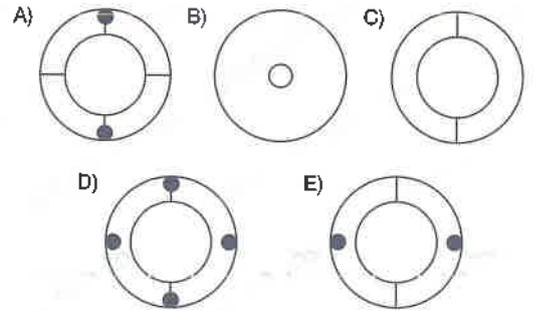
8.



Yukarıdaki figürler altlarında numaraları yazılı şekillerin üst üste getirilmesiyle elde edilir.

Buna göre II numaralı şekil aşağıdakilerden hangisidir?

The figures above are obtained by superimposing the figures whose numbers are written below them. Accordingly, which of the following figure II is?



1.

A) 3 B) 4 C) 5 D) 8 E) 11

2.

A) 3 B) 4 C) 5 D) 1 E) 2

3.

A) 2 B) 3 C) 4 D) 5 E) 6

4.

I. = 5

II. = 4

III. = 9

IV. = ?

A) 6 B) 7 C) 8 D) 4 E) 5

5.

A) 6 B) 7 C) 8 D) 9 E) 10

6.

⇒ = ?

A) 36 B) 40 C) 48 D) 56 E) 60

TEST 8

Şekil Karşılaştırma / Figure Comparison

7.

A) 1 B) 3 C) 4 D) 8 E) 9

10.

A) 1, 2, 1, 2 B) 2, 1, 0, 3 C) 1, 0, 2, 3
D) 2, 2, 1, 1 E) 2, 1, 2, 1

8.

A) 1 B) 3 C) 5 D) 7 E) 9

11. I. = 3
 II. = 6
 III. = 4
 IV. = ?
 A) 2 B) 4 C) 5 D) 6 E) 8

9. I. = 2
 II. = 9
 III. = 5
 IV. = ?
 A) 8 B) 9 C) 15 D) 16 E) 20

12. I.

	a		
		b	
c			

 = $a^2 \cdot b^3 \cdot c$
 II.

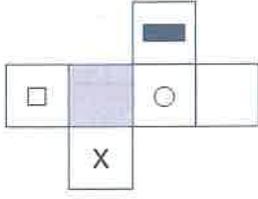
			2
3			
	1		

 = 48
 III.

		2	
	3		
x			

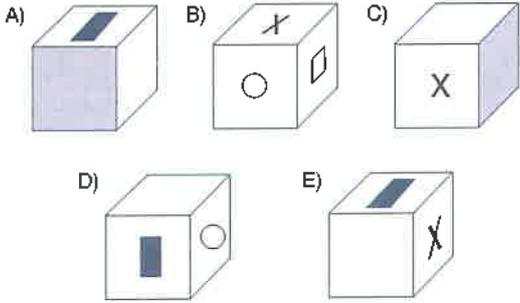
 = ?
 A) $27 \cdot x^3$ B) $9 \cdot x$ C) $24 \cdot x^2$
 D) $8 \cdot x^3$ E) $72 \cdot x$

1.

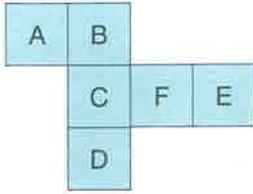


Yukarıda açık hal verilen küpün kapalı hal hangisidir?

Which one could be the closed version of the open cube given above?



2.

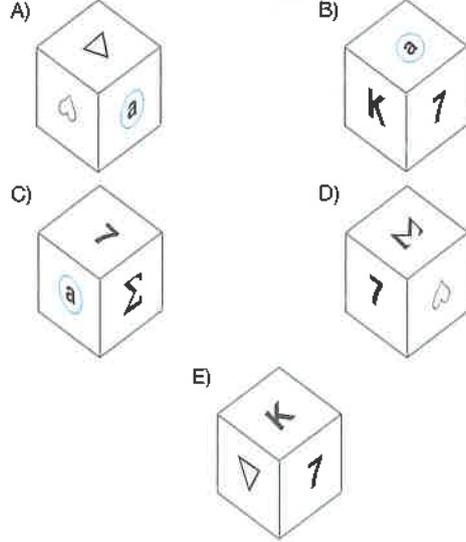
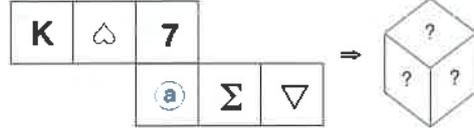


Yukarıdaki açık şekil katlanarak küp haline getirildiğinde, F'nin karşısına hangi harf gelir?

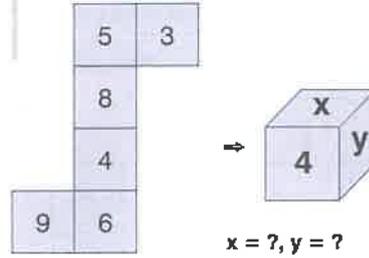
If the above figure is folded into a cube, which letter opposes to the letter F?



3.

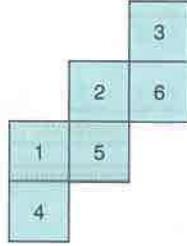


4.



- A) $x = 5, y = 3$
- B) $x = 8, y = 6$
- C) $x = 8, y = 5$
- D) $x = 9, y = 3$
- E) $x = 8, y = 3$

5.

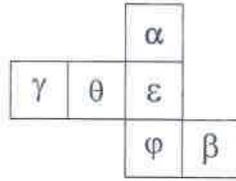


Yukarıdaki şekil katlanarak bir küp elde edildiğinde, 3 sayısının komşuluğunda olan sayıların toplamı kaç olur?

What is the sum of numbers neighboring to the number 3 when the shape above is folded into a cube?

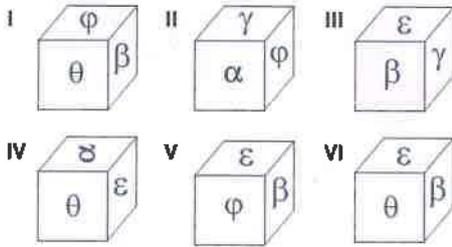
- A) 12 B) 13 C) 14
D) 15 E) 17

6.



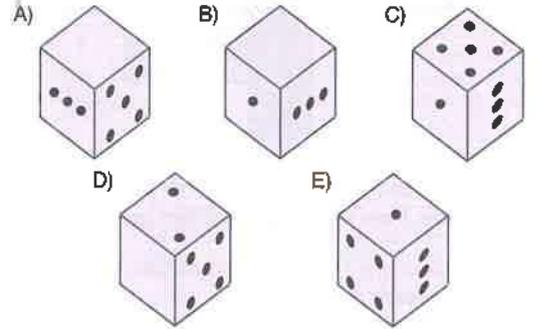
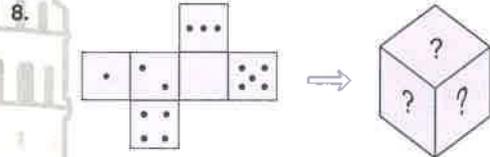
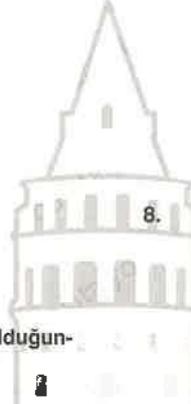
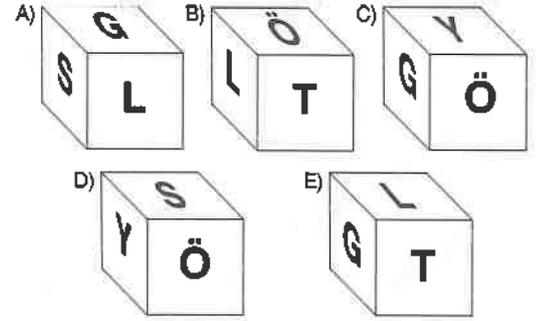
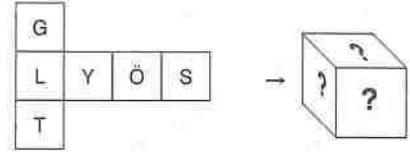
Yukarıdaki şekil katlanarak bir küp oluşturulduğunda, aşağıdakilerden hangi ikisi ortaya çıkar?

When the above figure is folded into a cube, what pair of the following is the result?

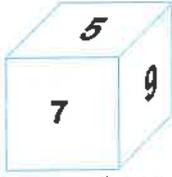


- A) I, III B) III, V C) II, IV
D) IV, V E) V, VI

7.



1.

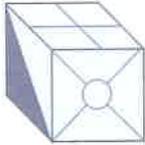


Verilen küpün açılımı aşağıdakilerden hangisidir?

Which one of the following is the unfolded form of the given cube?

- A)
- B)
- C)
- D)
- E)

2.

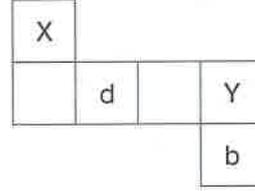
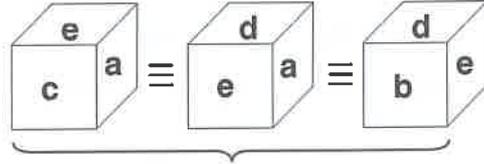


Verilen küpün açılımı aşağıdakilerden hangisidir?

Which one of the following is the unfolded form of the given cube?

- A)
- B)
- C)
- D)
- E)

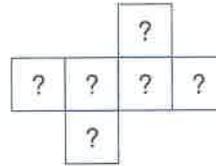
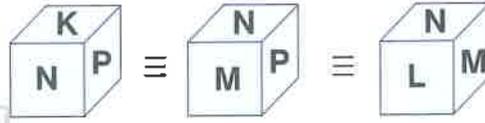
3.



X = ?, Y = ?

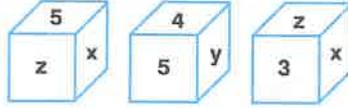
- A) c,e B) a,e C) e,a
D) a,c E) e,c

4.



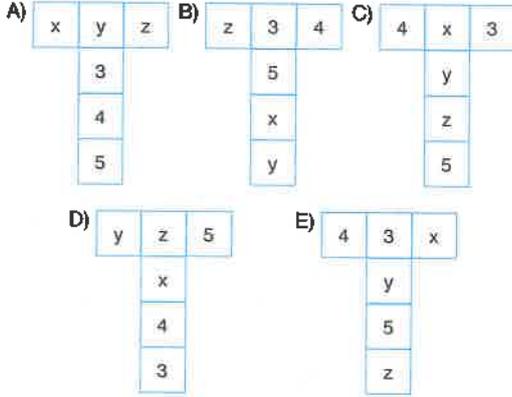
- A)
- B)
- C)
- D)
- E)

5.

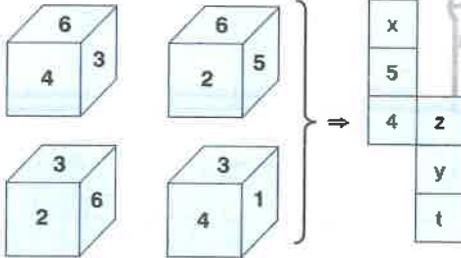


Bir küpün farklı konumlardaki görünüşleri veriliyor. Bu küpün açılımı aşağıdakilerden hangisi olabilir?

Different views of a cube are given. Which of the following might be the expansion of this cube?



6.



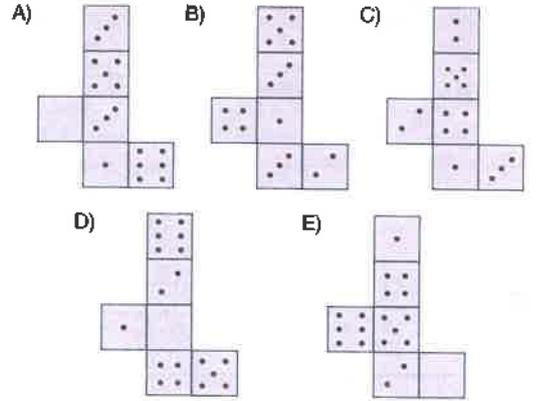
$$x - y + z - t = ?$$

- A) -6 B) -4 C) 2 D) 4 E) 6

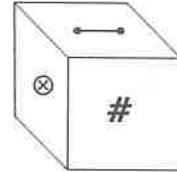
7.

Bir küpün karşılıklı yüzelerindeki noktaların toplamı 6 olduğuna göre, aşağıdakilerden hangisi bu küpün bir açılımı değildir?

Since the sum of the points on opposite surfaces of a cube is 6, which of the following is not an expansion of this cube?

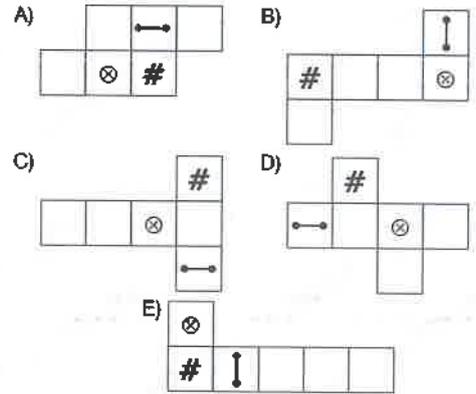


8.

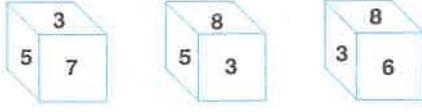


Verilen küpün açık şekil aşağıdakilerden hangisidir?

Which of the following is the unfolded form of the given cube?



1.

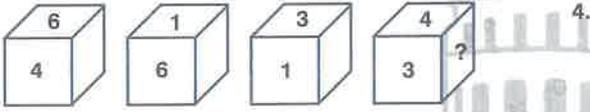


Aynı küpün farklı görünüşleri verilmiştir. Buna göre, üzerine 5 yazılı yüzün karşısındaki yüzeyde hangi sayı yazılıdır?

Different views of the same cube are given. What number is written on the surface opposite to the surface with the number 5 on it?

- A) 3 B) 4 C) 6 D) 7 E) 8

2.

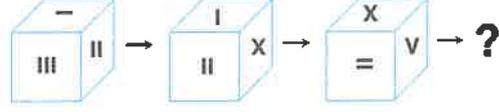


Yüzeylerinde 1 den 6 ya kadar sayıların bulunduğu bir küp verilmiştir. Buna göre, soru (?) işareti yerine hangi sayı gelebilir?

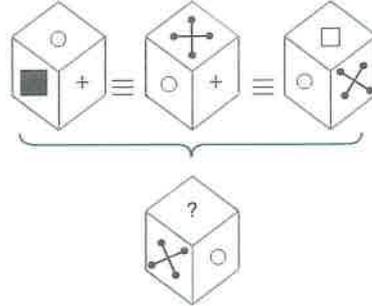
A cube has the numbers 1 to 6 on its surfaces. Accordingly, which number can replace the question (?) mark?

- A) 2 B) 4 C) 6
D) 1 E) 3

3.



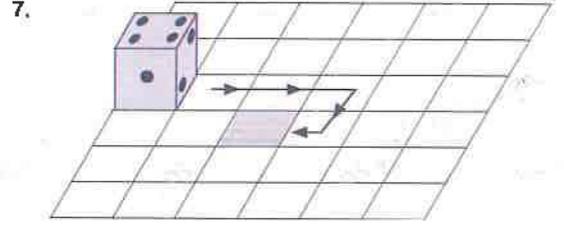
- A) B)
C) D)
E)



- A) □ B) ○ C) ■
D) ⊗ E) +

5. I. II. III. IV. V.

A) B) C) D) E)



Yukarıda karşılıklı yüzeylerde toplamları 7 olan bir zar verilmiştir. Bu zar ok yönünde yuvarlanarak boyalı bölgeye getirildiğinde, üst yüze gelen sayı kaç olur?

Numbers of the opposite faces of the dice given above sum up to 7. This dice is brought to the shaded spot in the direction by row. What number will appear on the top of the dice?

- A) 2 B) 3 C) 4 D) 5 E) 6

6. I. Adım II. Adım III. Adım IV. Adım

I. Step II. Step III. Step IV. Step

Belli bir kurala göre oluşturulan şeklin V. adım hangisi olur?

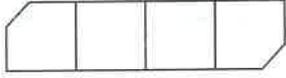
Which of the following takes place in V. step?

A) B) C) D) E)

8.

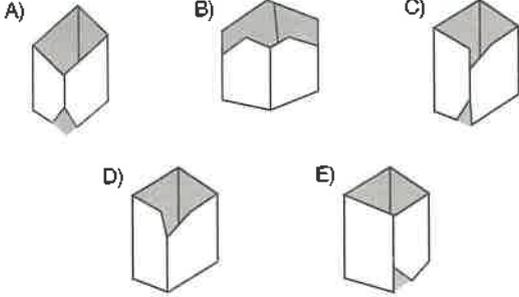
A) P B) O C) K
D) L E) M

1.

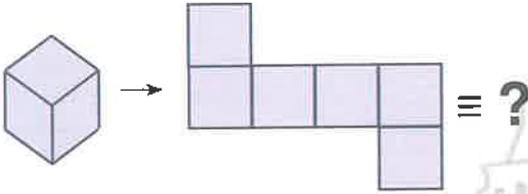


Yukarıdaki şekil katlandığında aşağıdakilerden hangisi elde edilir?

Which of the following will be obtained when the figure above is folded?

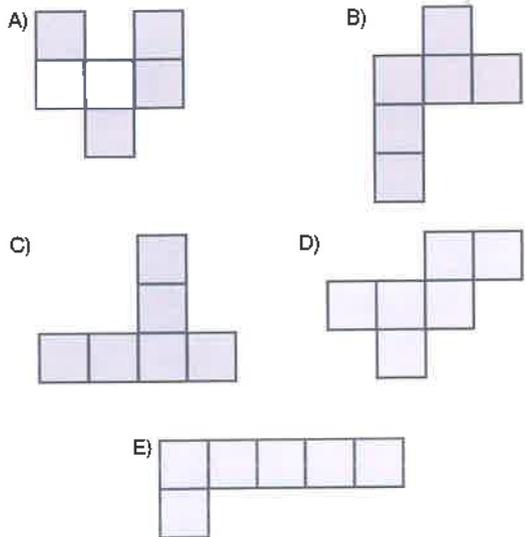


2.



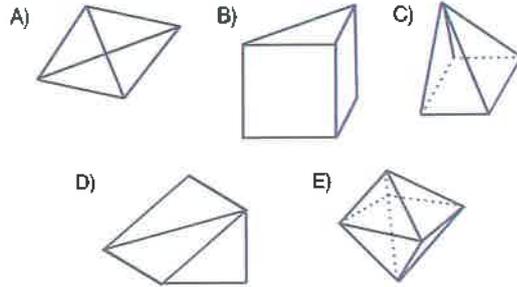
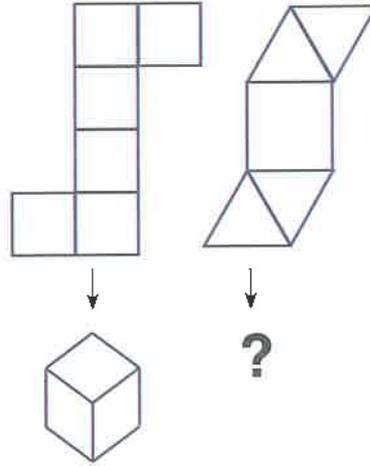
Aşağıdakilerden hangisi yukarıdaki küpün açılımlarından birisidir?

Which of the following can be the unfolded form of the cube above?

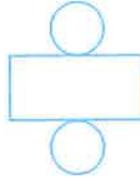


3.

I. II.

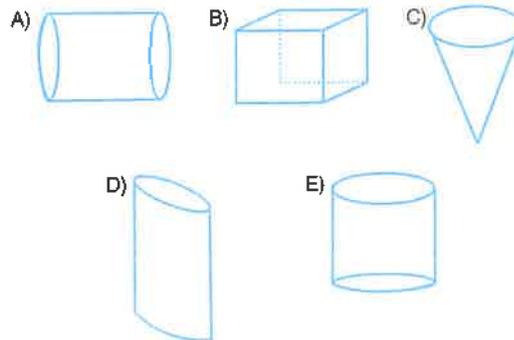


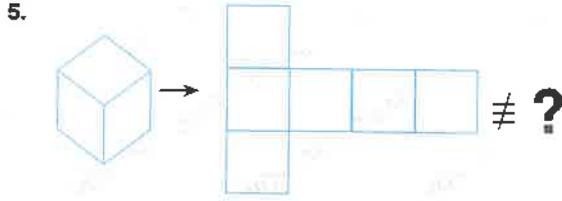
4.



Yukarıdaki şekil aşağıdakilerden hangisinin açılmış halidir?

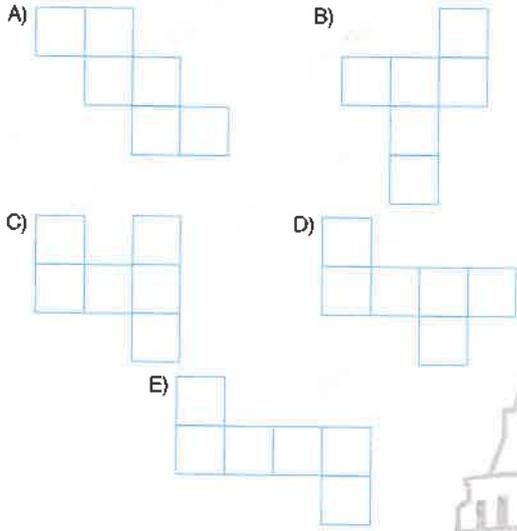
Which of the following is the unfolded form as it is given above?





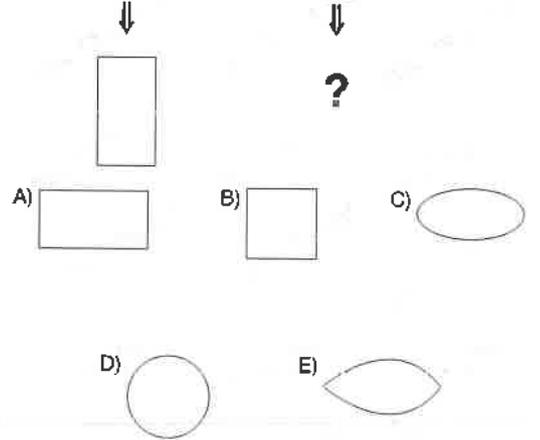
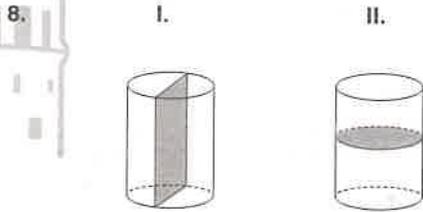
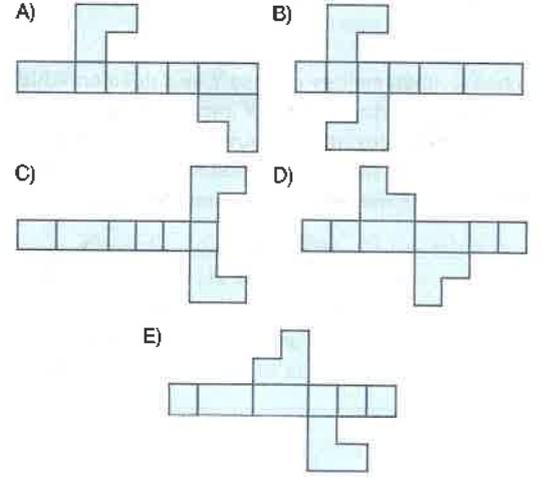
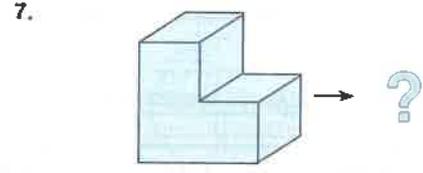
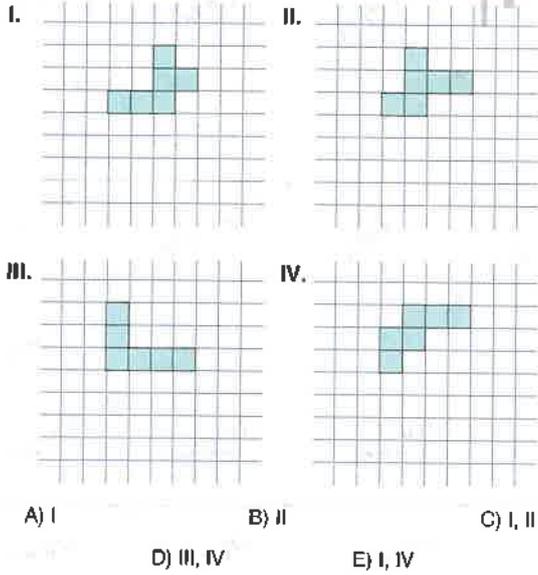
Aşağıdakilerden hangisi yukarıdaki küpün bir açılımı değildir?

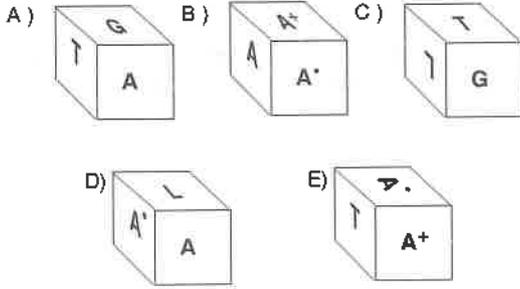
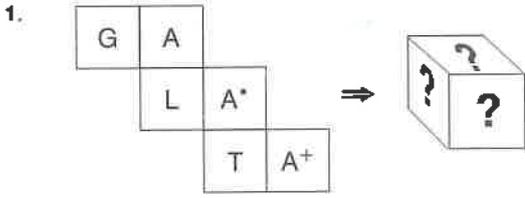
Which of the following is not the expansion of the cube above?



6. Aşağıdakilerden hangileri bir küpün açılmış haldedir?

Which of the following are the unfolded of a cube?

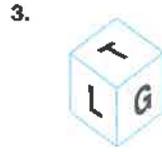




Yukarıdaki şekil katlanarak küp elde edildiğinde, 5 sayısının komşuluğunda bulunan sayıların toplamı kaç olur?

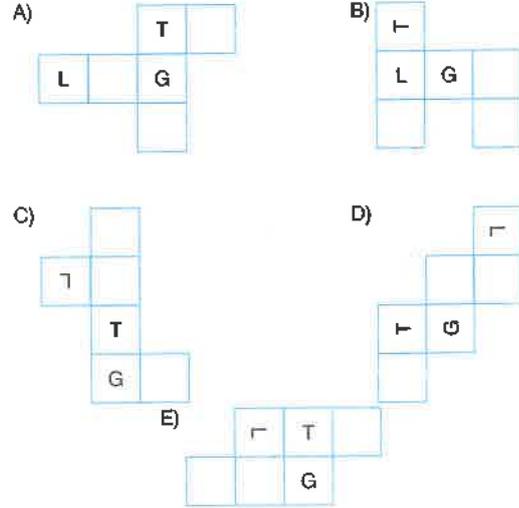
What is the sum of numbers next to the number 5 when the shape above is folded into a cube?

- A) 10 B) 11 C) 12
D) 13 E) 14



Yanda verilen küpün açık şekli aşağıdakilerden hangisidir?

Which one of the following shapes is the expansion of the cube?

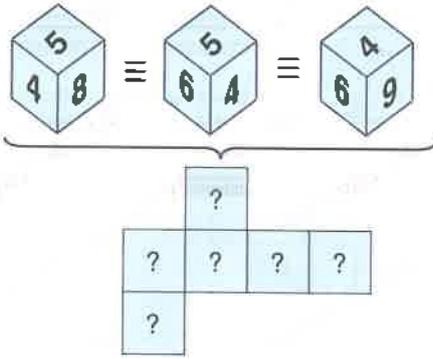


Yukarıdaki açık şekil katlanarak küp haline getirilirse, X'in karşısına hangi sembol gelir?

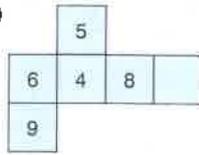
If the above shape is folded to form a cube, which symbol opposes the letter X?

- A) ♥ B) + C) ☆
D) ↺ E) ⊙

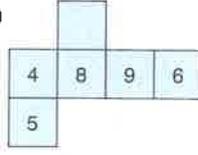
5.



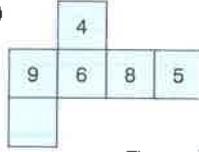
A)



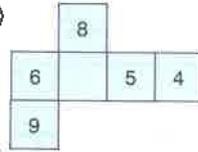
B)



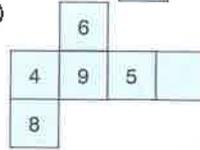
C)



D)



E)



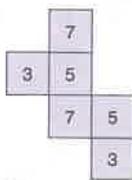
6.



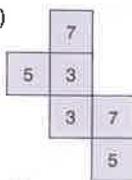
Yukarıdaki küpün karşılıklı yüzlerinde aynı rakamlar bulunduğuna göre, bu küpün bir açılımı aşağıdakilerden hangisidir?

If there are the same numbers on the opposite faces of the cube above, which of the following is an expansion of this cube?

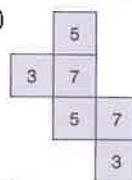
A)



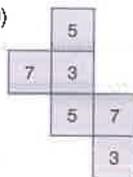
B)



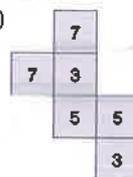
C)



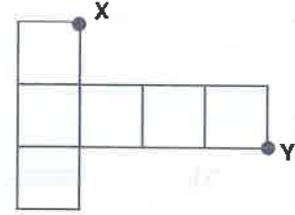
D)



E)



7.



Yukarıda birim küpün açılımı verilmiştir. Tekrardan küp haline getirildiğinde X ve Y noktaları arasındaki uzaklık kaç birimdir?

An unfolded form of a unit cube is given above. When it is folded back to form a cube, what will be the distance between X and Y, in units?

A) 0

B) $\frac{\sqrt{2}}{2}$

C) 1

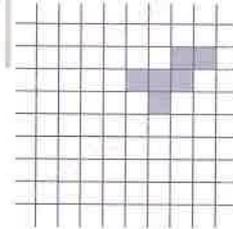
D) $\sqrt{2}$

E) $\sqrt{3}$

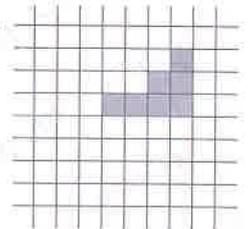
8. Aşağıdakilerden hangileri bir küpün açılımı değildir?

Which of the following are not the expansion of a cube?

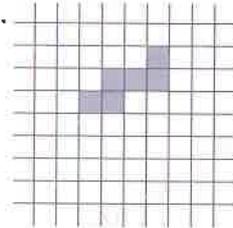
I.



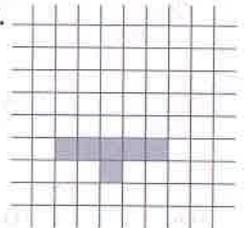
II.



III.



IV.



A) II, IV

B) II

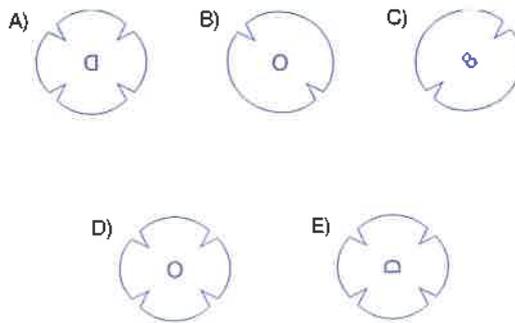
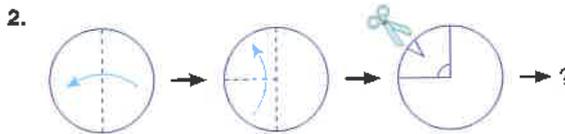
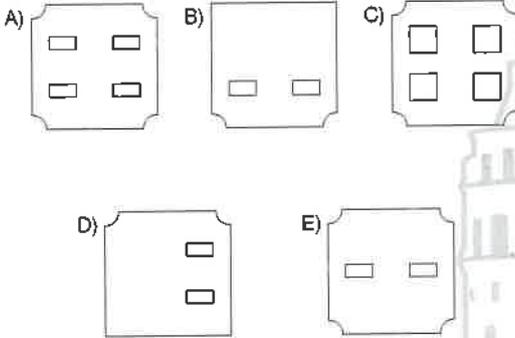
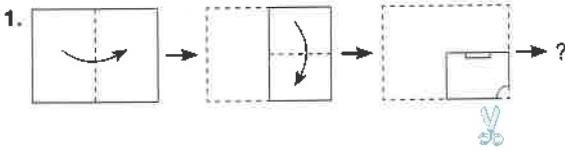
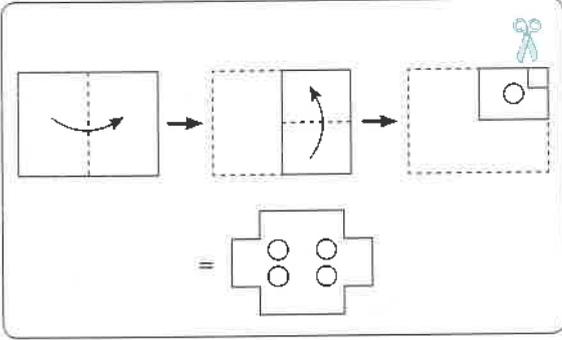
C) I, II

D) III, IV

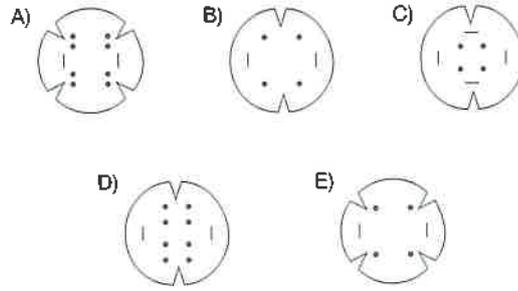
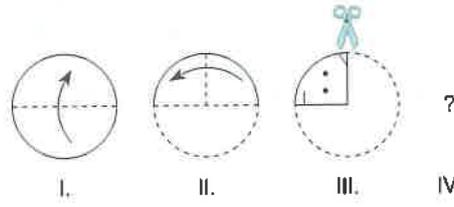
E) I, IV

Aşağıdaki örneğe göre verilen soruları çözünüz.

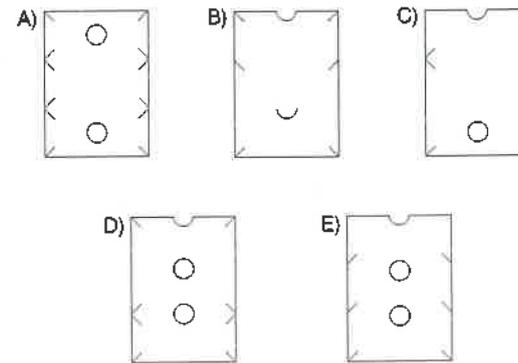
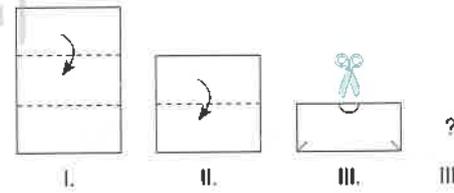
Answer the given questions according to the following example.

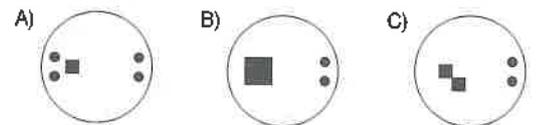
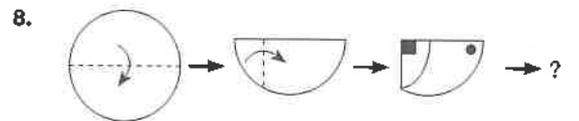
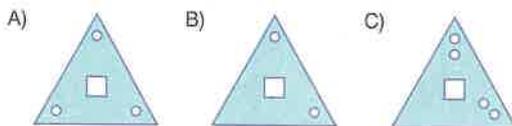
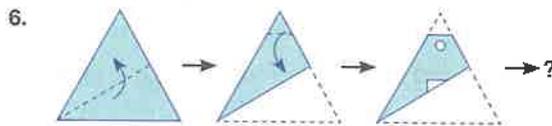
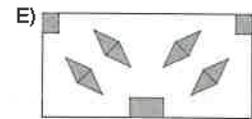
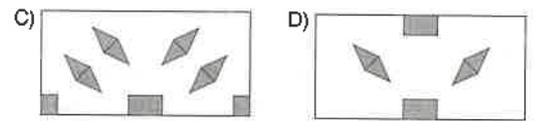
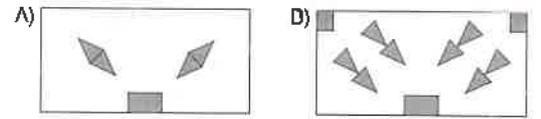
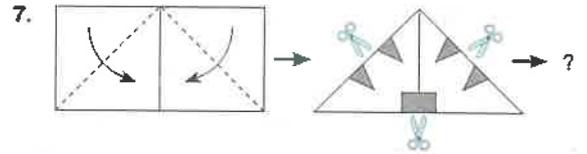
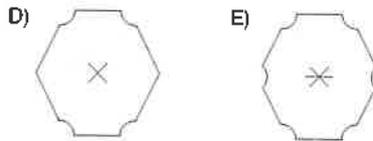
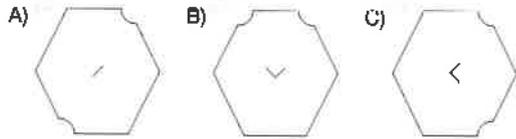
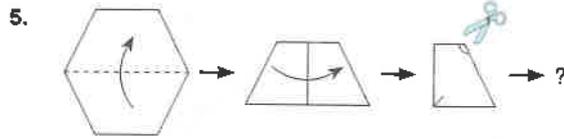


3.

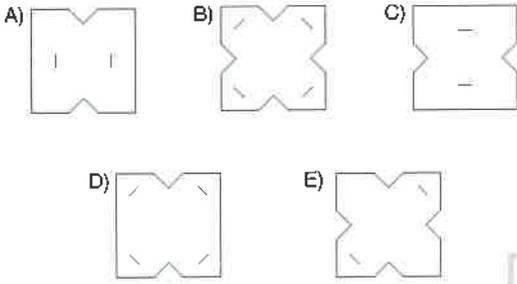
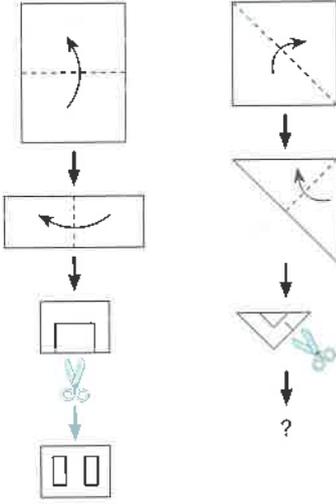


4.

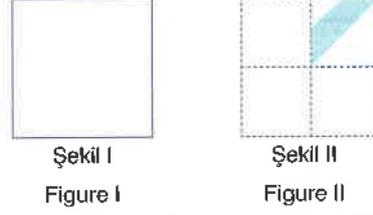




1.

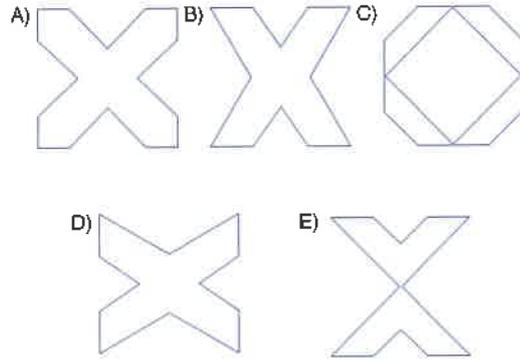


3.

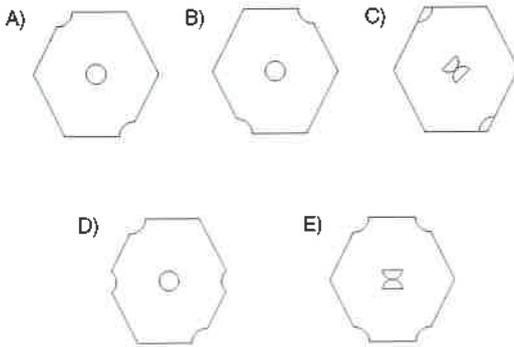
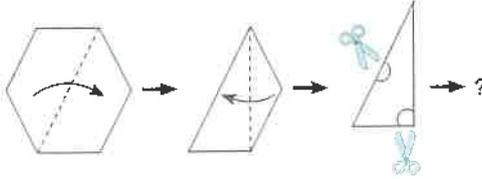


Şekil I. deki kâğıt parçası şekil II. deki gibi katlanarak kesiliyor. Kesilen kâğıt geri açılında aşağıdaki şekillerden hangisi oluşur?

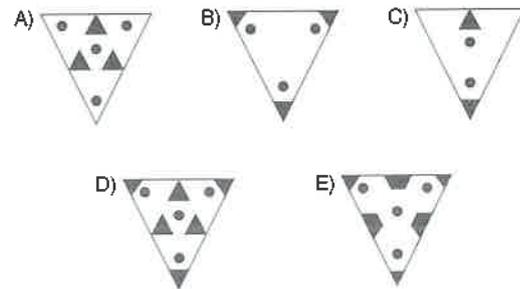
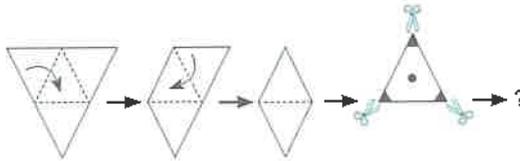
The paper in figure I. is folded and cut as shown in figure II. Which of the following shapes is formed when the paper is unfolded back?



2.



4.

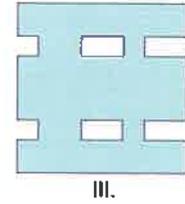
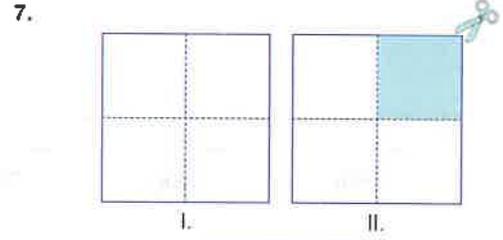
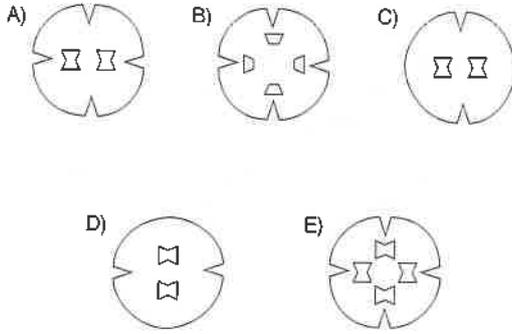
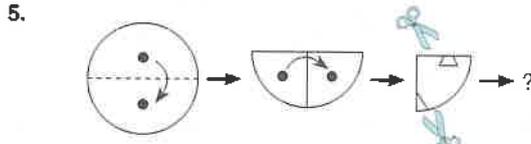


1 - E

2 - D

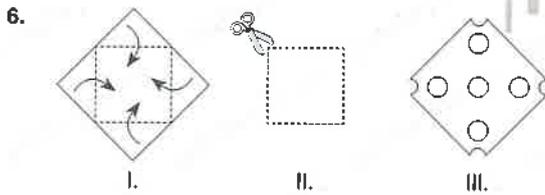
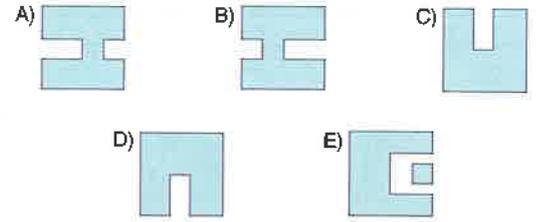
3 - E

4 - E



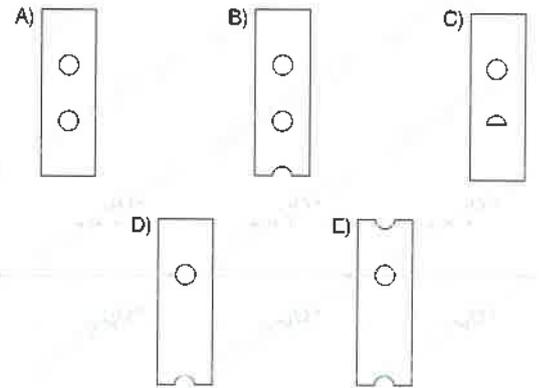
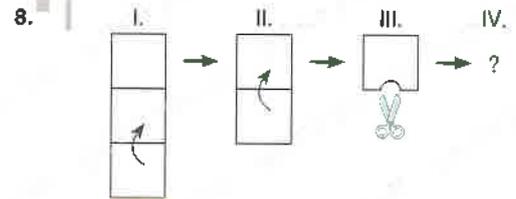
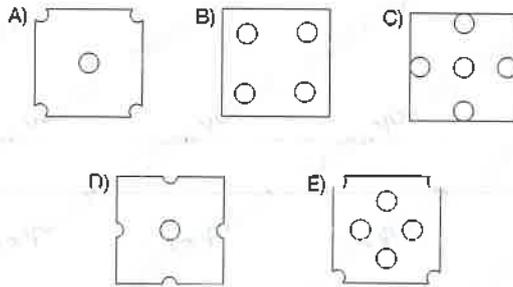
III. şeklin oluşması için II. şekli nasıl kesmek gerekiyor.

How cut figure II. in order to get figure III.?

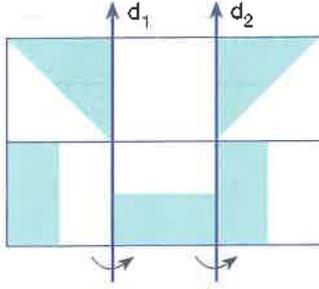


Şeklin oluşması için II. şekli nasıl kesmek gerekiyor.

How cut figure II. in order to get figure III.?

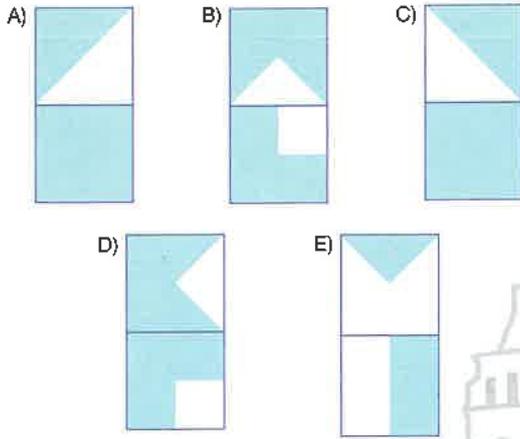


1.

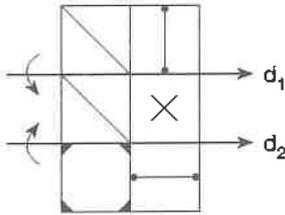


Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?

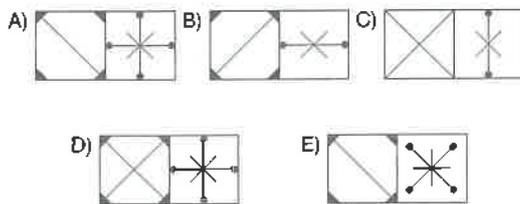


2.

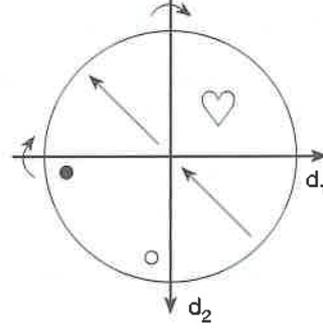


Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?

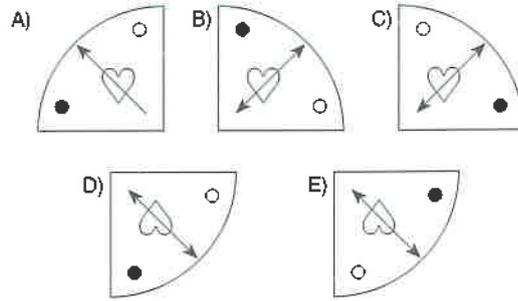


3.

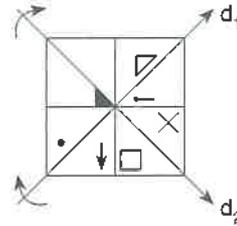


Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?

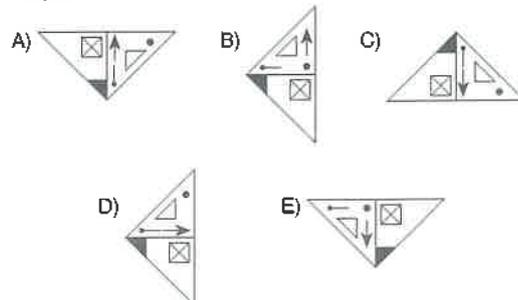


4.



Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?



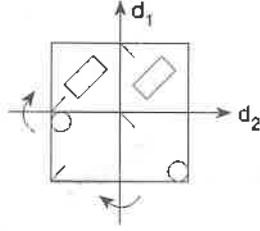
1 - B

2 - D

3 - C

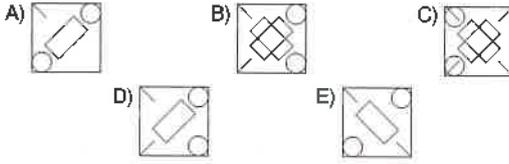
4 - A

5.

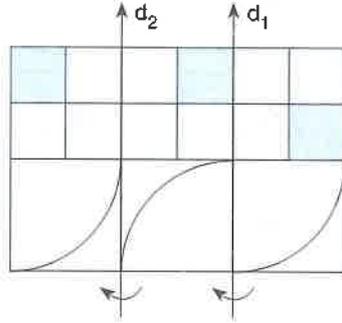


Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?

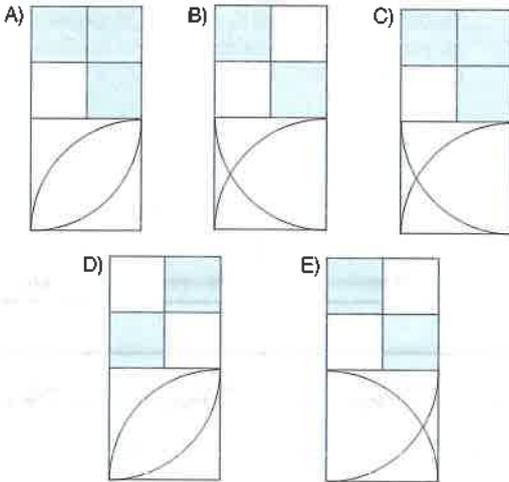


6.



Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

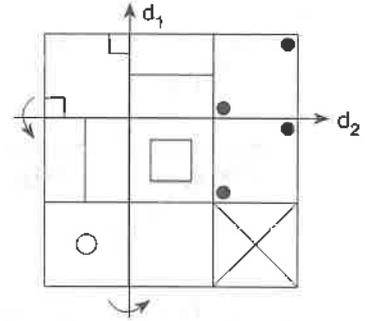
If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?



5 - C

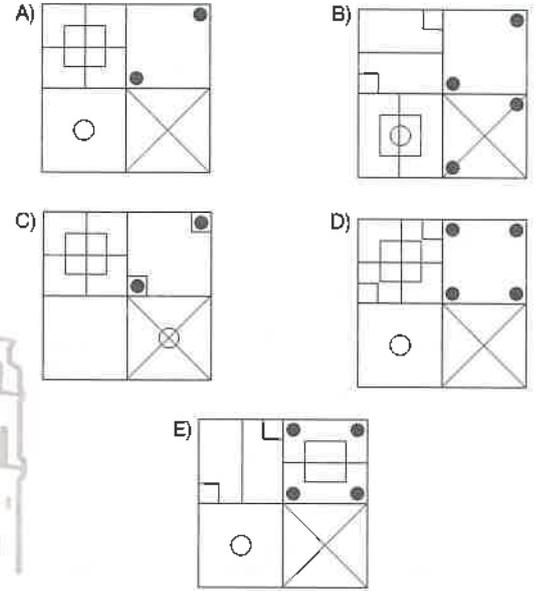
6 - E

7.

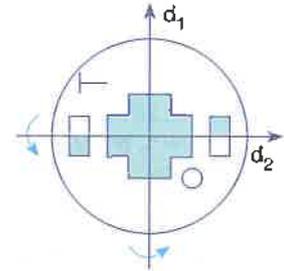


Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?



8.



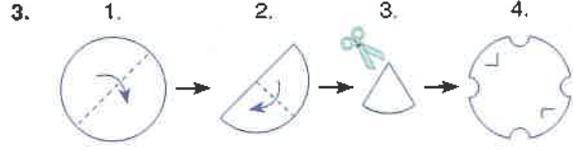
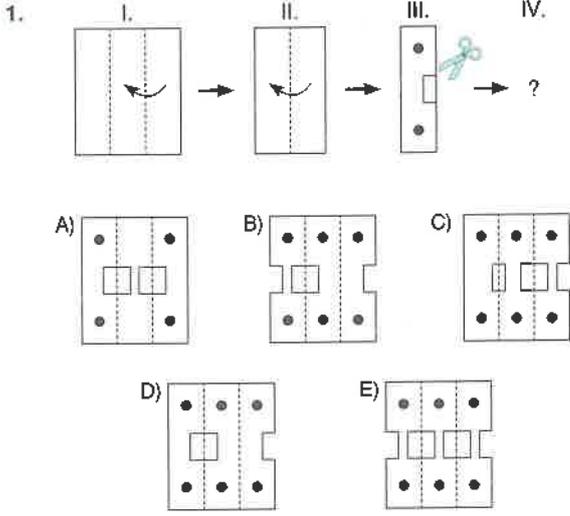
Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?



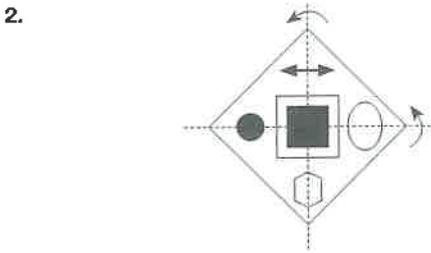
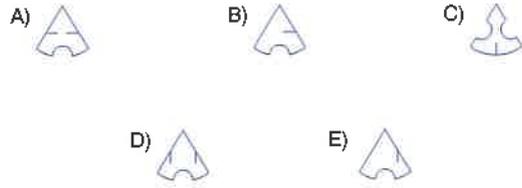
7 - D

8 - A



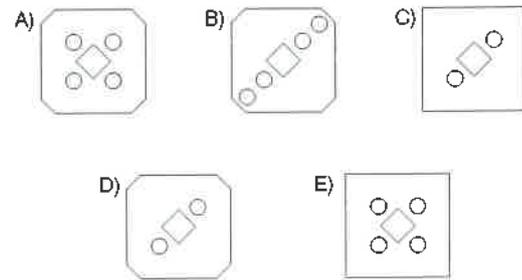
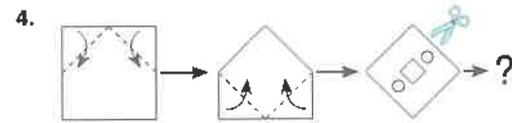
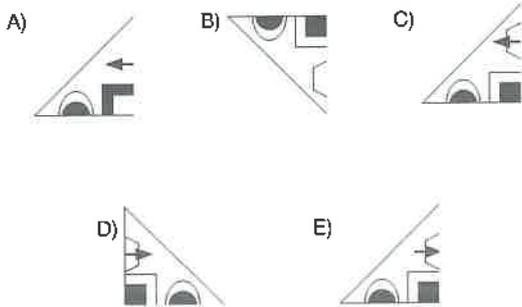
4. şekli elde etmek için 3. şekli nasıl kesmek gerekiyor?

How to cut the 3rd figure in order to obtain the 4th figure?

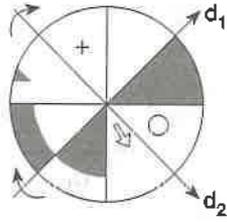


Verilen şekil kesikli çizgilerden katlırsa aşağıdaki görüntülerden hangisi oluşur?

If the given figure is folded from the dashed lines, which of the following views is formed?

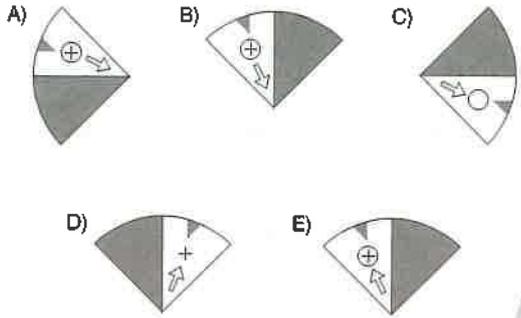


5.

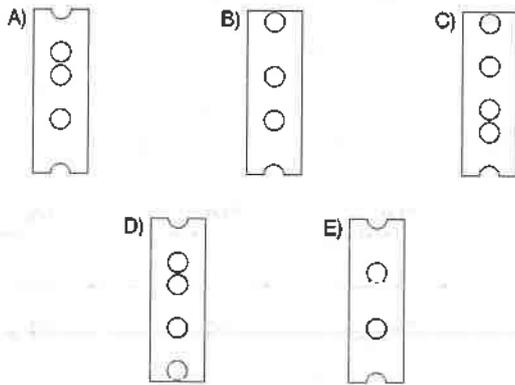
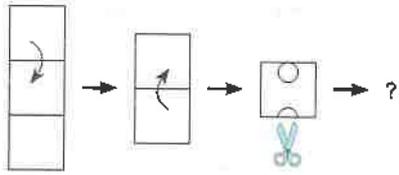


Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ok yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

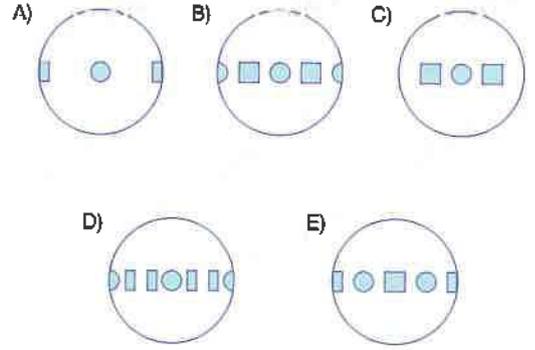
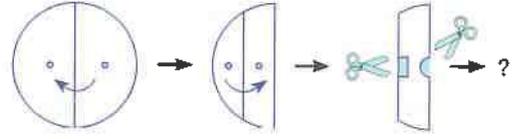
If the figure above is respectively folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?



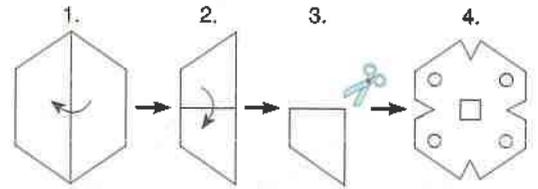
6.



7.

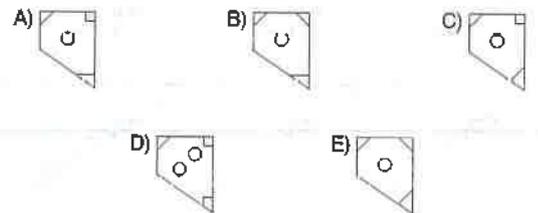


8.

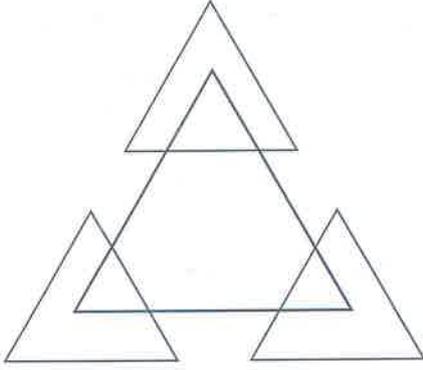


4. şekli elde etmek için 3. şekli nasıl kesmek gerekiyor?

How to cut the 3rd figure in order to obtain the 4th figure?



1.

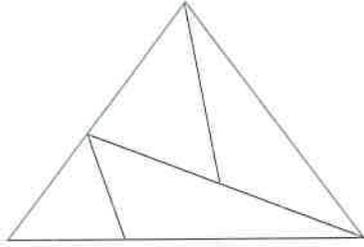


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 4 B) 5 C) 7 D) 9 E) 10

2.

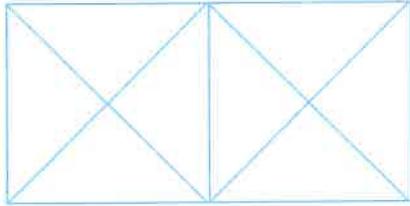


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 5 B) 6 C) 7 D) 8 E) 9

3.

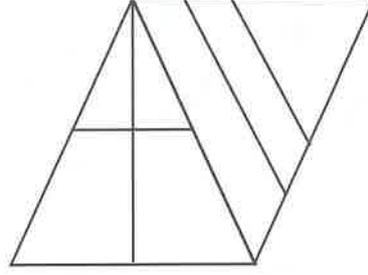


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 8 B) 12 C) 16 D) 18 E) 20

4.

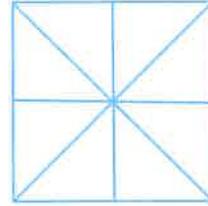


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 6 B) 7 C) 8 D) 9 E) 10

5.

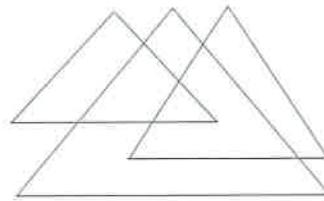


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 8 B) 10 C) 12 D) 14 E) 16

6.

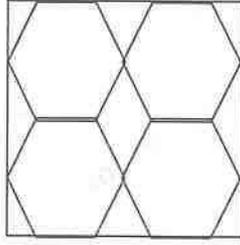


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 5 B) 6 C) 7 D) 8 E) 9

7.

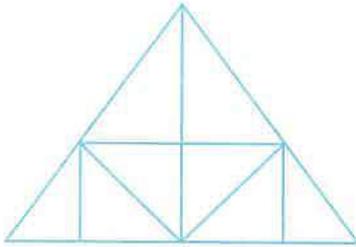


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 4 B) 6 C) 8 D) 10 E) 12

8.

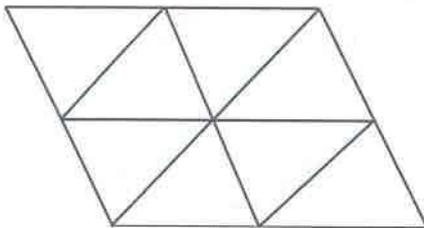


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 20 B) 19 C) 18 D) 17

9.

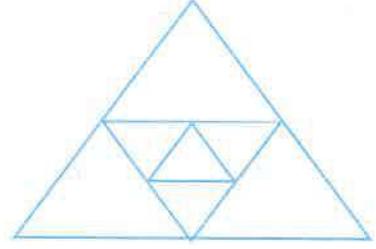


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 8 B) 10 C) 12 D) 14 E) 16

10.

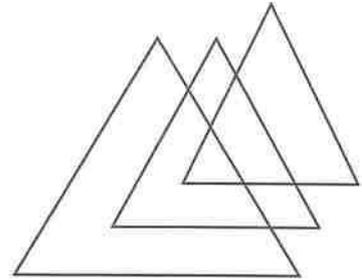


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 7 B) 8 C) 9 D) 10 E) 11

11.

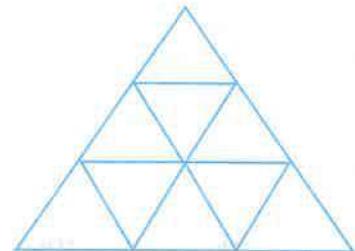


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 4 B) 5 C) 6 D) 7 E) 8

12.

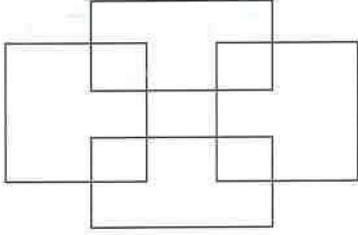


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 11 B) 12 C) 13 D) 14 E) 15

1.

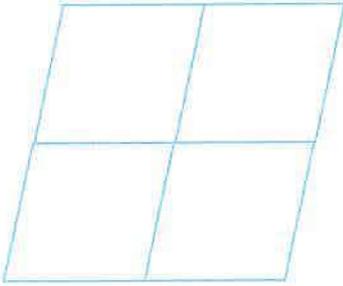


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 7 B) 8 C) 9 D) 10 E) 11

2.

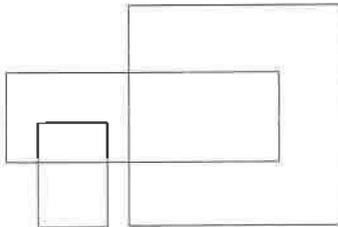


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 6 B) 7 C) 8 D) 9 E) 10

3.

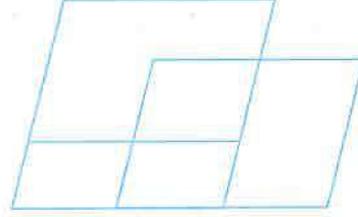


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 5 B) 6 C) 7 D) 8 E) 9

4.

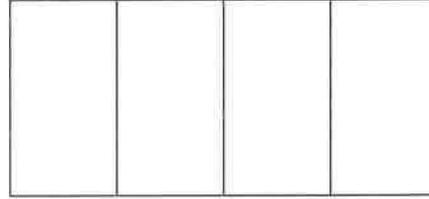


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 10 B) 9 C) 8 D) 7 E) 6

5.

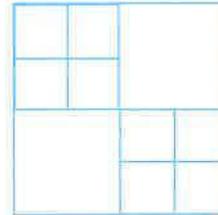


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 12 B) 10 C) 8 D) 7 E) 6

6.



Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 20 B) 21 C) 24 D) 25 E) 28

1 - C

2 - D

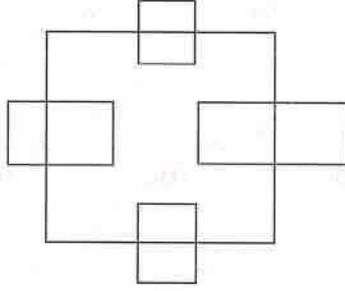
3 - C

4 - B

5 - B

6 - D

7.

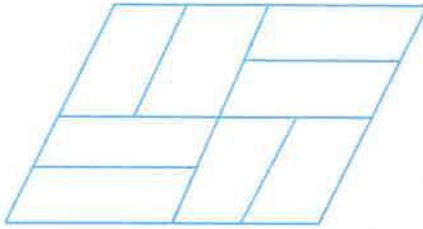


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 12 B) 13 C) 14 D) 15 E) 16

8.

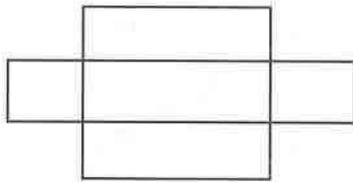


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 16 B) 17 C) 18 D) 19 E) 20

9.

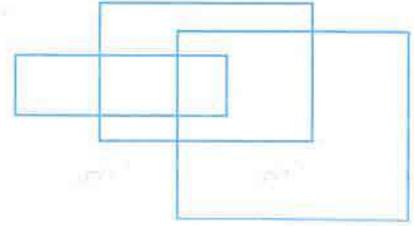


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 9 B) 6 C) 11 D) 12 E) 13

10.

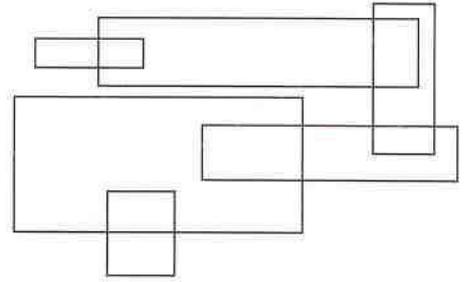


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 7 B) 8 C) 9 D) 10 E) 11

11.

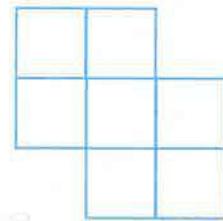


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 10 B) 12 C) 14 D) 16 E) 18

12.

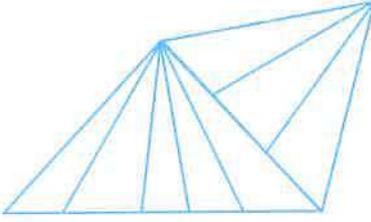


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 20 B) 19 C) 18 D) 17 E) 16

1.

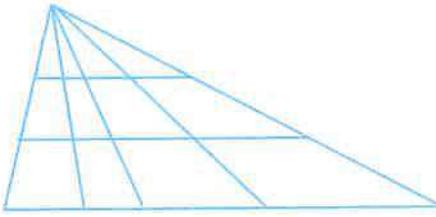


Yukardaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 15 B) 16 C) 19 D) 21 E) 25

2.

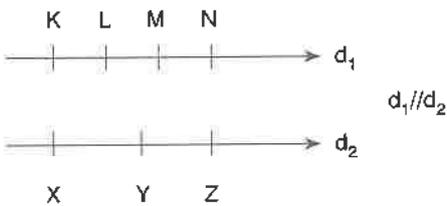


Yukardaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 20 B) 24 C) 30 D) 32 E) 35

3.

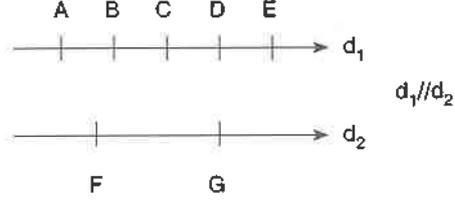


Köşeleri yukarıda verilen 7 noktadan üçü olan kaç üçgen oluşturulabilir?

How many triangles can be formed whose vertices are among the 7 points given above?

- A) 20 B) 30 C) 35 D) 40 E) 45

4.

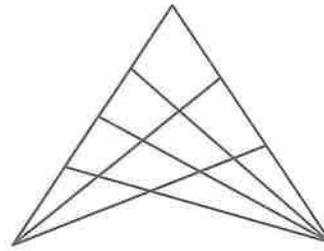


Köşeleri yukarıda verilen 7 noktadan üçü olan kaç üçgen oluşturulabilir?

How many triangles can be formed whose vertices are among the 7 points given above?

- A) 18 B) 20 C) 25 D) 27 E) 30

5.

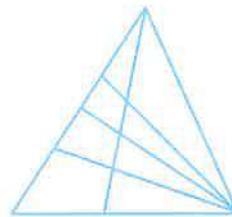


Yukardaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 22 B) 24 C) 26 D) 28 E) 30

6.



Yukardaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 20 B) 21 C) 24 D) 25 E) 27

1 - D

2 - C

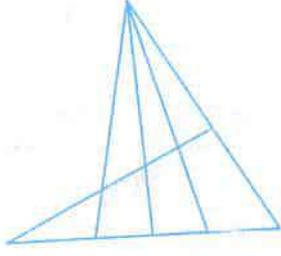
3 - B

4 - C

5 - E

6 - C

7.

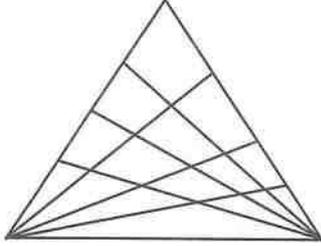


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 14 B) 15 C) 16 D) 17 E) 18

8.

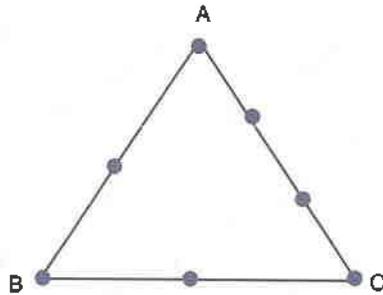


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 48 B) 54 C) 58 D) 64 E) 70

9.

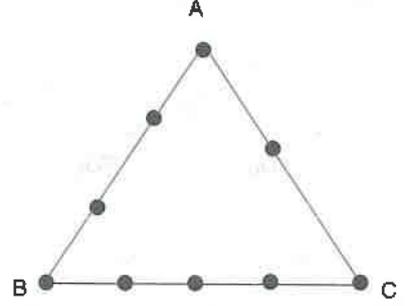


ABC üçgeninde yerilen 7 noktadan kaç farklı üçgen çizilebilir ?

How many different triangles can be drawn using 7 points on the triangle ABC ?

- A) 21 B) 23 C) 25 D) 27 E) 29

10.

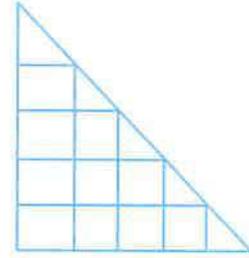


ABC üçgeninde verilen 9 noktadan kaç farklı üçgen çizilebilir ?

How many different triangles can be drawn using 9 points on the triangle ABC ?

- A) 66 B) 67 C) 68 D) 69 E) 70

11.

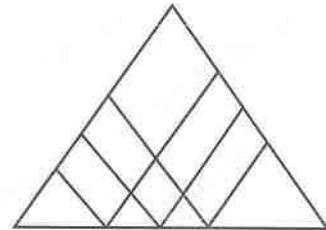


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 6 B) 8 C) 10 D) 15 E) 18

12.

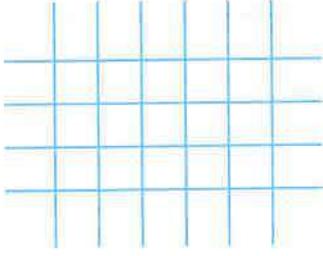


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 6 B) 10 C) 8 D) 12 E) 9

1.

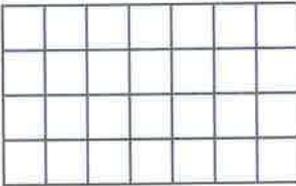


Yukarıdaki şekilde kaç dikdörtgen vardır ?

How many rectangles are there in the figure above?

- A) 64 B) 72 C) 80 D) 90 E) 96

2.

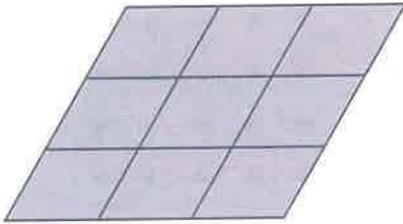


Yukarıdaki şekilde kaç kare vardır ?

How many squares are there in the figure above?

- A) 40 B) 42 C) 50 D) 56

3.



Yukarıdaki şekilde kaç paralelkenar vardır ?

How many parallelograms are there in the figure above?

- A) 24 B) 27 C) 30 D) 36 E) 40

4.

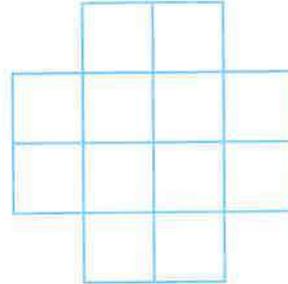


B harfinden başlayarak komşu harfler takip edilerek BARIŞ yazısı kaç farklı biçimde okunabilir ?

How many possible ways are there to read the word BARIŞ if it is allowed to start from letter B and follow neighboring letters?

- A) 30 B) 31 C) 33 D) 27 E) 28

5.

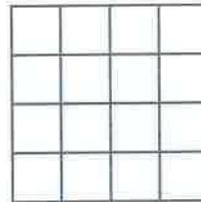


Yukarıdaki şekilde kaç kare vardır ?

How many squares are there in the figure above?

- A) 14 B) 15 C) 16 D) 17 E) 18

6.

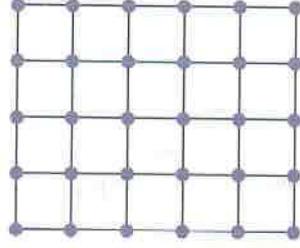


Şekilde 1 x 2'lik dikdörtgen sayısı kaçtır ?

How many 1 x 2 rectangles are there in the figure ?

- A) 8 B) 10 C) 12 D) 14 E) 16

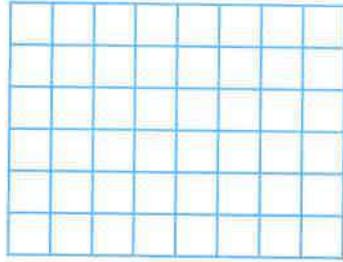
7.



Şekilde 2 x 2 tipinde kaç kare vardır ?

How many squares of type 2 x 2 are there in the figure?

- A) 8 B) 9 C) 12 D) 15 E) 16



Yukarıdaki şekil 48 birim kareden oluşuyor. Buna göre, 8. ve 9. soruları cevaplayınız.

The figure above consists of 48 unit squares. Accordingly, answer questions 8 and 9.

8. Şekilde alanı $9b^2$ olan kaç kare vardır?

How many squares with the area of $9u^2$ are there in the figure?

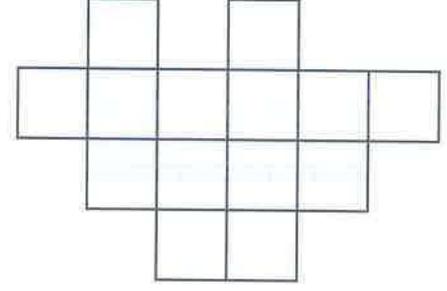
- A) 15 B) 18 C) 20 D) 24 E) 35

9. Şekilde çevresi $8b$ olan kaç kare vardır?

How many squares with the perimeter of $8u$ are there in the figure?

- A) 28 B) 35 C) 36 D) 42 E) 48

10.

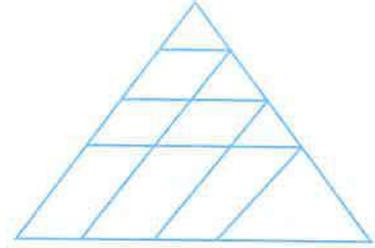


Yukarıdaki şekilde kaç dörtgen vardır ?

How many quadrilaterals are there in the figure above?

- A) 51 B) 53 C) 55 D) 57 E) 59

11.

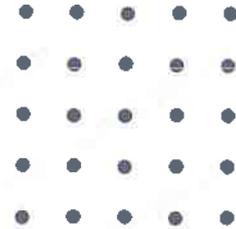


Yukarıdaki şekilde kaç paralelkenar vardır?

How many parallelograms are there in the figure above?

- A) 9 B) 10 C) 12 D) 14 E) 15

12.

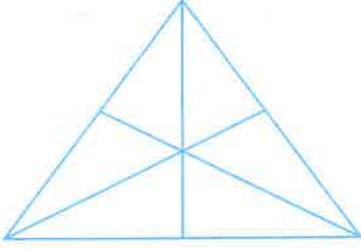


Köşeleri yukarıdaki noktalara gelecek biçimde en fazla kaç kare çizilebilir?

How many squares at most can be drawn whose vertices coincide with the points above?

- A) 20 B) 24 C) 30 D) 32 E) 36

1.



Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 12 B) 14 C) 15 D) 16 E) 18

2.

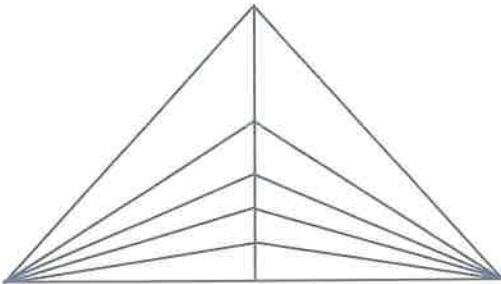


Kaç farklı şekilde GAMZE kelimesi okunur?

In how many ways the word GAMZE can be read?

- A) 5 B) 6 C) 7 D) 8 E) 9

3.

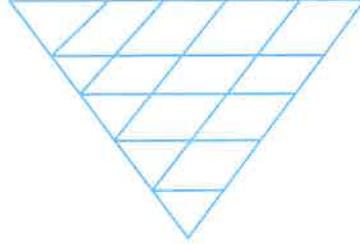


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 33 B) 34 C) 35 D) 36 E) 37

4.

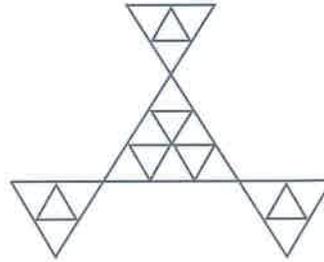


Yukarıdaki şekilde kaç paralelkenar vardır?

How many parallelograms are there in the figure above?

- A) 28 B) 30 C) 32 D) 33 E) 35

5.

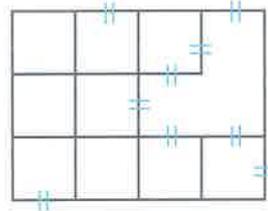


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 22 B) 24 C) 26 D) 28 E) 30

6.

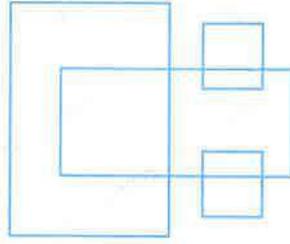


Yukarıdaki şekilde kaç kare vardır?

How many squares are there in the figure above?

- A) 11 B) 12 C) 13 D) 14 E) 15

7.

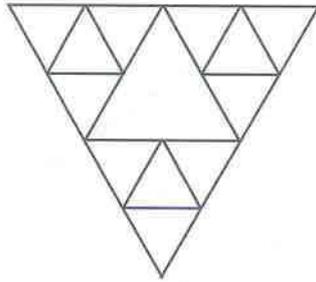


Yukarıdaki şekilde kaç dikdörtgen vardır?

How many rectangles are there in the figure above?

- A) 8 B) 9 C) 10 D) 11 E) 12

8.

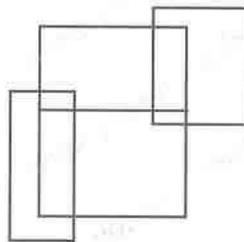


Yukarıdaki şekilde kaç üçgen vardır ?

How many triangles are there in the figure above?

- A) 14 B) 15 C) 16 D) 17

9.

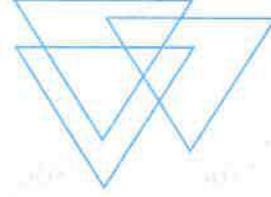


Yukarıdaki şekilde kaç dikdörtgen vardır ?

How many rectangles are there in the figure above?

- A) 9 B) 10 C) 11 D) 12 E) 13

10.



Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

- A) 5 B) 6 C) 7 D) 8 E) 9

11.

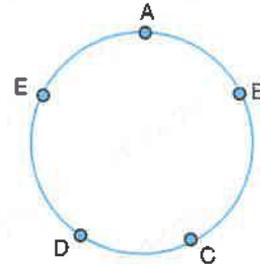
S	A	D	E
A	D	E	L
D	E	L	İ
E	L	İ	K

Yukarıdaki şekilde "SADELİK" yazısı kaç farklı biçimde yazılabilir ?

How many different ways are possible to write "SADELİK" ?

- A) 10 B) 12 C) 15 D) 20 E) 24

12.

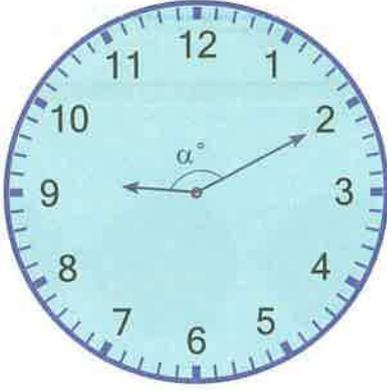


Köşeleri A, B, C, D ve E noktalarından üçü olan kaç üçgen oluşturabilir ?

How many triangles can be formed whose vertices are among A, B, C, D, and E?

- A) 5 B) 8 C) 10 D) 12 E) 15

1.



$\alpha = ?$

- A) 130 B) 135 C) 140
D) 145 E) 150

2. Saat 7.50 'de akrep ile yelkovan arasındaki dar açının derecesi kaçtır?

What is the measure of the acute angle in degrees between hour-hand and minute hand at 7.50?

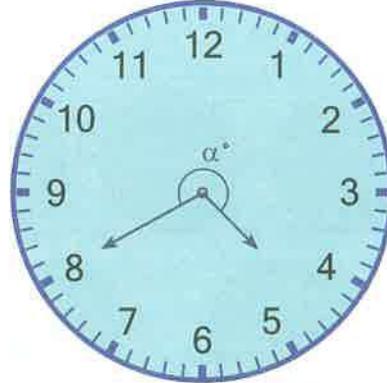
- A) 50 B) 55 C) 60 D) 65 E) 70

3. Saat 15.24 'te akrep ile yelkovan arasındaki geniş açının derecesi kaçtır?

What is the measure of the obtuse angle in degrees between hour-hand and minute hand at 15.24?

- A) 138 B) 188 C) 222 D) 276 E) 318

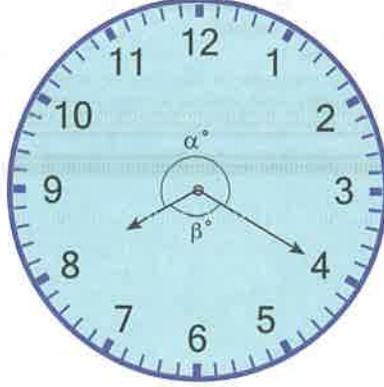
4.



$\alpha = ?$

- A) 270 B) 260 C) 250
D) 240 E) 230

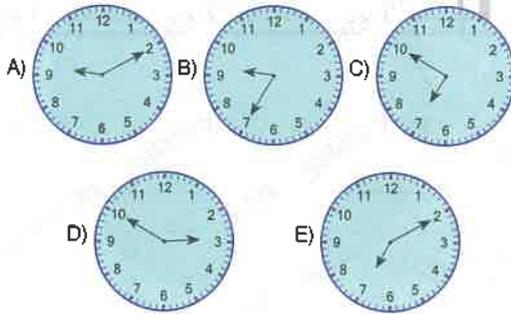
5.



$\alpha - \beta = ?$

- A) 80 B) 90 C) 100
D) 110 E) 120

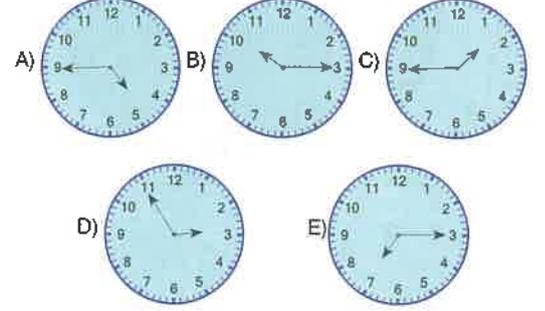
6. Aşağıdakilerden hangisi saat 9.10'da saatin aynadaki görüntüsüdür?



5 - C

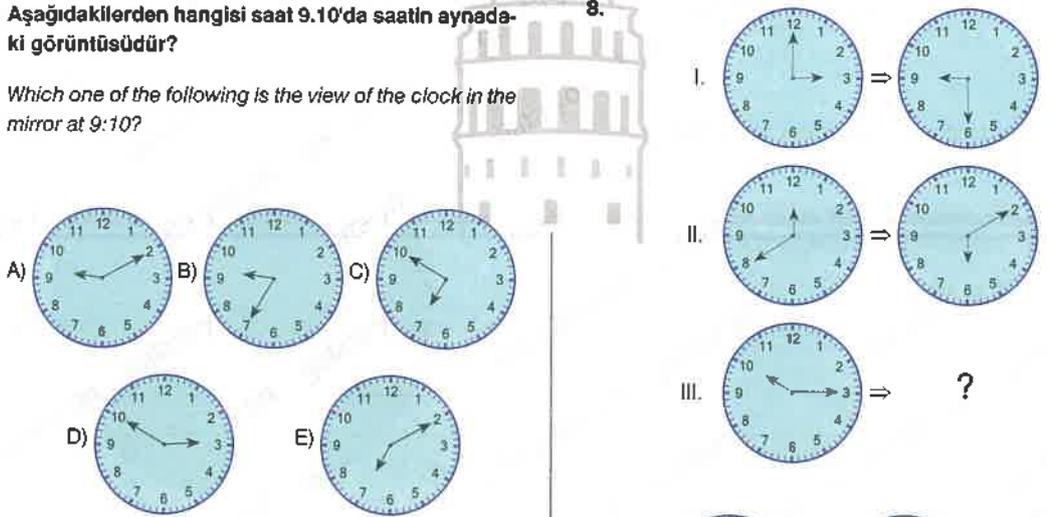
7. Aşağıdakilerden hangisi saat 16.45'da saatin aynadaki görüntüsüdür?

Which one of the following is the view of the clock in the mirror at 16:45?



7 - E

8. Aşağıdakilerden hangisi saat 9.10'da saatin aynadaki görüntüsüdür?



6 - D

8 - B

1. Saat şimdiki tam 11' i gösteriyor. 2020 saat sonra saat kaç gösterir?

If a clock shows 11 now, what time will this clock show after 2020 hours?

- A) 8 B) 7 C) 5 D) 4 E) 3

3. Dijital saat şu an 13.15' i gösterdiğine göre, 616 saat sonra aynı saat kaç gösterir?

If a digital clock shows 13.15 now, what time will this clock show after 616 hours?

- A) 4.15 B) 5.15 C) 6.15
D) 8.15 E) 10.15

2. Günde 48 dakika geri kalan bir saat kaç gün sonra doğru saati gösterir?

If a clock falls 48 minutes behind daily, how many days later will this clock show the correct time?

- A) 20 B) 30 C) 40 D) 50 E) 60

4. Bugün günlerden Çarşamba. 444 gün sonra günlerden hangi gün olur?

Today is Wednesday. What day will be after 444 days?

- A) Perşembe B) Cuma C) Cumartesi
Thursday Friday Saturday

- D) Pazar E) Pazartesi
Sunday Monday

5. Bugün günlerden Cuma. 300 gün önce günlerden ne olur?

Today is Friday. What day would be 300 days ago?

- A) Perşembe B) Cumartesi C) Pazar
Thursday Saturday Sunday
- D) Pazartesi E) Salı
Monday Tuesday

7. Bugün 8 Nisan Salı ve saat 15.00 olduğuna göre, 500 saat sonraki tarih, gün ve saat hangisidir?

If today is 8 April, Tuesday and 15:00 o'clock, what will be the date, the day and the time after 500 hours?

<u>Tarih (Date)</u>	<u>Gün (Day)</u>	<u>Saat (Time)</u>
A) 28 Nisan 28 April	Pazartesi Monday	20.00
B) 29 Nisan 29 April	Salı Tuesday	21.00
C) 28 Nisan 28 April	Pazartesi Monday	17.00
D) 29 Nisan 29 April	Salı Tuesday	11.00
E) 30 Nisan 30 April	Çarşamba Wednesday	7.00

6. Bugün günlerden Pazar. 288 saat önce günlerden ne olur?

Today is Sunday. What day would be 288 hours ago?

- A) Pazartesi / Monday
 B) Salı / Tuesday
 C) Çarşamba / Wednesday
 D) Perşembe / Thursday
 E) Cuma / Friday

8. Bugün 25 Eylül Cuma ve saat 9.00 olduğuna göre, 238 saat önceki tarih, gün ve saat hangisidir?

If today is 25 September, Friday and 9:00 o'clock, what will be the date, the day and the time after 238 hours?

<u>Tarih (Date)</u>	<u>Gün (Day)</u>	<u>Saat (Time)</u>
A) 15 Eylül 15 September	Salı Tuesday	11.00
B) 16 Eylül 16 September	Çarşamba Wednesday	09.00
C) 15 Eylül 15 September	Çarşamba Wednesday	11.00
D) 16 Eylül 16 September	Çarşamba Wednesday	10.00
E) 17 Eylül 17 September	Perşembe Thursday	7.00

1. Bir asker 5 günde bir nöbet tutuyor. Bu asker ilk nöbetini pazartesi tuttuğuna göre, 12. nöbetini hangi gün tutar?

A soldier is on guard once every 5 days. If the soldier's first guard is on Monday, on what day will his 12th guard be?

- A) Çarşamba / Wednesday
B) Perşembe / Thursday
C) Cuma / Friday
D) Cumartesi / Saturday
E) Pazar / Sunday

3. Bir okulda Tark öğretmen 5 günde bir, Canan öğretmen ise 3 günde bir nöbetçi oluyor. İkisinin birlikte tutacağı ilk nöbet perşembe günü olduğuna göre, birlikte tutacakları 10. nöbet hangi güne denk gelir?

Teacher Tark is on guard once every 5 days, but teacher Canan is on guard in the same school, once every 3 days. If their first guard together is on Thursday, on what day is their 10th guard together?

- A) Cuma / Friday
B) Cumartesi / Saturday
C) Pazar / Sunday
D) Pazartesi / Monday
E) Salı / Tuesday

2. Bir hasta 3 günde bir ilaç alıyor. Bu hasta 14. ilacını pazar günü aldığına göre, ilk ilacını hangi gün almıştır?

A patient takes a medicine once every 3 days. If the patient takes his 14th medicine on Sunday, on what day did this patient take his first medicine?

- A) Pazartesi / Monday
B) Salı / Tuesday
C) Çarşamba / Wednesday
D) Perşembe / Thursday
E) Cuma / Friday

4. Bir saat şu an 10.45' i gösteriyor ise 1530 dakika önce saat kaç göstermiş olur?

If it is right now 10.45, what time would be 1530 minutes ago?

- A) 8.00 B) 8.30 C) 9.15
D) 9.30 E) 9.45



5. Bir öğrenci haftada 6 gün soru çözüyor ve pazar günleri dinleniyor. Bir gün 50 soru çözen öğrenci ertesi gün 30 soru çözüyor. Bu öğrenci pazartesi 50 soru çözümlerini başlatmıştır. Aynı öğrenci 2500 soru çözümlerini hangi gün tamamlamıştır?

A student solves questions 6 days in a week and the takes a break for only Sundays. If this student solves 50 questions in a day, the next day he solves only 30 questions. On Monday, the student begins by solving 50 questions. What day will this student complete solving 2500 questions totally?

- A) Cumartesi / Saturday
B) Pazartesi / Monday
C) Salı / Tuesday
D) Çarşamba / Wednesday
E) Perşembe / Thursday

6. Bir sporcu 5 gün antrenman yapıp 1 gün dinleniyor. Salı günü antremana başlayan bu sporcu 17. dinlenmesini hangi gün yapar?

An athlete is practicing for 5 days and he is taking a break for 1 day. If this athlete begins practicing on Tuesday, on what day will he take his 17th break?

- A) Pazartesi / Monday
B) Salı / Tuesday
C) Çarşamba / Wednesday
D) Cuma / Friday
E) Cumartesi / Saturday

7. Her gün 9 dakika geri kalan saat kaçınıcı ayda doğru saati gösterir?

If a clock falls 9 minutes behind daily, how many months later will the clock show the correct time?

- A) 4 B) 5 C) 6 D) 7 E) 8

8. Bir fotokopi makinesi her 3 dakikada 50 sayfa yazdırabilmektedir.

Makine 14.40 da çalışmaya başladığına göre, 15.25 de kaç sayfa yazdırmış olur?

A copy machine can print 50 pages per 3 minutes.

If the machine starts working at 14:40, how many pages will be printed until 15:25?

- A) 500 B) 550 C) 650
D) 750 E) 950

1. – 3. sorularda verilen tablolarda 1'den 9'a kadar rakamlar her satır, sütun ve köşegen üzerinde bulunan sayıların toplamı eşit olacak şekilde kullanılıyor.

In questions 1 – 3, numbers from 1 to 9 are used in each table so that the sum of the numbers in each row, column, and diagonal is equal.

1.

G	L	T
	A	

$$G + L + T + A = ?$$

- A) 12 B) 15 C) 18 D) 20 E) 24

2.

A		C
	B	D
		8

$$A + B + C + D = ?$$

- A) 10 B) 14 C) 16 D) 20

3.

x		8
		y
	7	

$$x \cdot y = ?$$

- A) 4 B) 8 C) 12 D) 18 E) 24

4.

G		19
		14

$$G = ?$$

- A) 15 B) 16 C) 17 D) 18 E) 20

5.

15	20	
		L

$$L = ?$$

- A) 19 B) 18 C) 17 D) 16 E) 14

6.

		19
18		
	T	

$$T = ?$$

- A) 14 B) 15 C) 16 D) 17 E) 20

7.

	17	★
+		
19	♥	

$$\star + + + \heartsuit = ?$$

5,7,9,11,13,16,21 sayıları yukarıdaki tabloda boş kalan yerlere satır, sütun ve köşegendeki sayıların toplamı eşit olacak şekilde yerleştiriliyor.

Numbers 5,7,9,11,13,15,21 are put in the empty places in the table above in a way that the sum of numbers in each row, column and diagonal is equal.

- A) 21 B) 23 C) 25 D) 27 E) 29

8.

9		
		12
x	6	

Yukarıdaki şekilde satır, sütun ve köşegen üzerindeki sayıların toplamı 24 olduğuna göre, $x = ?$

If the sum of the numbers on the row, column and diagonal in the figure above is 24, $x = ?$

- A) 5 B) 6 C) 7 D) 10 E) 11

9.

10		19
	x	14

Yukarıdaki şekilde satır, sütun ve köşegen üzerindeki sayıların toplamı eşit olduğuna göre, $x = ?$

In the figure above, if the sum of the numbers on the row, column, and diagonal is equal, $x = ?$

- A) 10 B) 14 C) 17 D) 20 E) 23

10.

		7
x		
9	13	

Yukarıdaki şekilde satır, sütun ve köşegen üzerindeki sayıların toplamı eşit olduğuna göre, $x = ?$

If the sum of the numbers on the row, column, and diagonal in the above figure is equal, $x = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

11.

X	9	
	Y	3
		Z

Yukarıdaki şekilde 1'den 9'a kadar rakamlar birer kez kullanıldığında, her satır, sütun ve köşegen üzerindeki sayıların toplamı eşit oluyor.

Buna göre, $X \cdot Y + Z = ?$

In the figure above, numbers from 1 to 9 are used once in a way that the sum of numbers in each row, column, and diagonal is equal. Accordingly, $X \cdot Y + Z = ?$

- A) 17 B) 18 C) 20 D) 25 E) 36

12.

A		B
C		D

Yukarıdaki şekilde 1'den 9'a kadar sayılar birer kez kullanıldığında, her satır, sütun ve köşegen üzerindeki sayıların toplamı eşit oluyor.

Buna göre, $A + B + C + D = ?$

In the figure above, numbers from 1 to 9 are used once in a way that the sum of numbers in each row, column, and diagonal is equal.

Accordingly, $A + B + C + D = ?$

- A) 15 B) 18 C) 20 D) 24 E) 25

			9
1	x	y	4
			5
13	3	z	t

Yukarıdaki tabloda 1'den 16'ya kadar sayılar her satır ve sütun toplamaları eşit olacak şekilde kullanılıyor. Buna göre, aşağıdaki 1. – 3. soruları cevaplayınız.

In the table above, numbers from 1 to 16 are used in a way that the sum of numbers in each row and column is the same. Accordingly, answer questions 1 – 3 given below.

10			
12	A		D
14		B	
16	E		C

Yukarıdaki tabloda 1'den 16'ya kadar sayılar birer kez kullanılmıştır. Her satırdaki sayıların toplamı eşittir. Her satırdaki sayılar azalan sırada verilmiştir. Buna göre, aşağıdaki 4. – 6. soruları cevaplayınız.

In the table above, numbers from 1 to 16 are used once. The sum of the numbers in each row is equal. The numbers in each row are in descending order. Accordingly, answer questions 4 to 6 below.

1. $t = ?$

- A) 7 B) 8 C) 14 D) 15 E) 16

2. $x \cdot y = ?$

- A) 150 B) 169 C) 182
D) 195 E) 210

3. $z^2 = ?$

- A) 1 B) 4 C) 27
D) 64 E) 256

4. $A + B + C = ?$

- A) 12 B) 14 C) 16 D) 18 E) 20

5. 2. sütundaki sayıların toplamı kaçtır?

What is the sum of numbers in the 2nd column?

- A) 46 B) 48 C) 50 D) 52 E) 54

6. $-A + B + C - D + E = ?$

- A) A B) B C) C D) D E) E

x		
		z
y		

Yukarıdaki tabloda 1'den 9'a kadar sayılar birer kez kullanılmıştır. x ve y buldukları satırın en küçük sayısı, z ise bulunduğu satır ve sütunun en büyük sayısıdır. Buna göre, 7. - 9. soruları cevaplayınız.

In the table above, numbers from 1 to 9 are used once. x and y are the smallest number of the row they are in, z is the greatest number of the row and column it is in. Accordingly, answer questions 7 - 9.

7. $x + y$ 'nin en küçük değeri kaçtır?

What is the smallest value of $x + y$?

- A) 5 B) 6 C) 2 D) 3 E) 4

8. $x + z$ 'nin en küçük değeri kaçtır?

What is the smallest value of $x + z$?

- A) 8 B) 7 C) 6 D) 5 E) 4

9. $x + 2y + z$ 'nin en büyük değeri kaçtır?

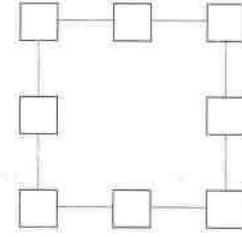
What is the greatest value of $x + 2y + z$?

- A) 16 B) 17 C) 18 D) 20 E) 24

7 - D

8 - A

9 - E



Yukarıdaki şekilde 1'den 8'e kadar sayılar birer kez kullanılmıştır. Buna göre, aşağıdaki 10. - 12. soruları cevaplayınız.

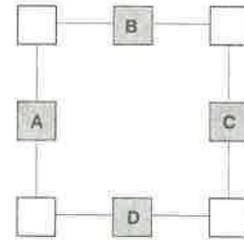
In the figure above, numbers from 1 to 8 are used only once. Accordingly, answer questions 10 - 12 given below.

10. Her bir kenar üzerinde bulunan sayıların toplamı 15 olduğuna göre, köşelerde bulunan sayıların toplamı kaçtır ?

If the sum of numbers on each side is 15, what is the sum of numbers on the corners?

- A) 20 B) 24 C) 25 D) 28 E) 30

11.

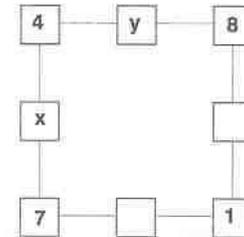


Her bir kenar üzerinde bulunan sayıların toplamı 12 olduğuna göre, $A + B + C + D$ kaçtır ?

If the sum of numbers on each side is 12, what is the value of $A + B + C + D$?

- A) 16 B) 18 C) 20 D) 24 E) 26

12.



Her bir kenar üzerinde bulunan sayıların toplamı eşit olduğuna göre, $2x - y$ kaçtır ?

If the sum of numbers on the each side is equal, what is the value of $2x - y$?

- A) 2 B) 4 C) 5 D) 6 E) 8

10 - B

11 - D

12 - B

1. 4 x 4 tabloda 1'den 4'e kadar olan rakamlar her satır ve sütunda birer kez kullanılmıştır.

In the 4 x 4 table above, numbers from 1 to 4 are used only once in each row and column.

1			C
A			2
2	3		
	B		4

$$\Rightarrow \frac{A+B}{C} = ?$$

- A) 1 B) 2 C) 4 D) 6 E) 8

2.

			Y
	1	4	
X	4	3	
3	2		

$$\Rightarrow X + Y = ?$$

- A) 6 B) 5 C) 4 D) 3 E) 2

3.

2	4		
A			1
		4	
1	3		B

$$\Rightarrow \frac{A}{B} = ?$$

- A) 1 B) $\frac{1}{2}$ C) 2 D) $\frac{3}{4}$ E) 3

4.

	1	x	4
y	2		
3		1	z

$$\Rightarrow x^2 + y^2 + z^2 = ?$$

- A) 9 B) 11 C) 12 D) 14 E) 21

5.

3	A	1	B
C	1	D	3
E	4	3	F
2	G	H	1

$$\Rightarrow \frac{A+B \cdot C+D}{E \cdot F-G \cdot H} = ?$$

- A) -2 B) -1 C) 1 D) 2 E) 4

6. Aşağıdaki 4 x 4 sudokuda 1'den 4'e kadar olan rakamlar her satır ve sütunda birer kez kullanılmıştır. Buna göre, aşağıdaki önermelerden hangileri doğrudur?

In the following 4 x 4 sudoku, the numbers from 1 to 4 are used once in each row and column. Accordingly, which of the following propositions are true?

K	4		3
		L	
4	M	2	
	1	4	N

I. $K + L : M - N = 2$

II. $\frac{K+L}{M-N} = 5$

III. $(M+N)^K = 36$

- A) I B) II C) II, III D) III E) I, II

7. - 12. sudoku sorularında 1'den 5'e kadar olan sayılar her satır ve sütunda birer kez kullanılmıştır.

In the 7th - 12th sudoku questions, the numbers from 1 to 5 were used once in each row and column.

7.

		1		
	3			
2		A		5
			2	
		4		

$\Rightarrow A = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

8.

			4	5
3		5		
			X	
5		2	Y	1
	5			

$\Rightarrow X - Y = ?$

- A) -2 B) -1 C) 0 D) 1 E) 2

9.

		2		L
5				3
		K	4	
1		4		M
	3			2

$\Rightarrow K + L + M = ?$

- A) 9 B) 10 C) 11 D) 12 E) 13

10.

			5	1
3			1	5
2	5		4	
1	3			
		X		

$\Rightarrow X = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

11.

	4			1
		4	3	
		2		4
X				
		1	4	2

$\Rightarrow X = ?$

- A) 1 B) 2 C) 3 D) 4 E) 5

12. Aşağıda verilenlerden hangileri doğrudur?

Which of the following are true?

a	1	2		3
4			2	
	5			c
3			1	
	2	b		

I. $a \cdot b + b \cdot c + c \cdot a = 23$

II. $a^2 + b^2 + c^2 - 3a \cdot b \cdot c = 10$

III. $a \cdot (b+c-a) - b^2 - c^2 = -15$

- A) I B) I, II C) I, III D) II E) II, III

1. Aşağıdaki 5 x 5 boyutlu tablonun her satır ve sütununda a,b,c,d,e harfleri birer kez kullanılmıştır. Buna göre, ? işareti yerine hangi harf gelmelidir?

In 5 x 5 table below, the letters a,b,c,d,e are used only once in each row and column. Accordingly, what letter must replace the question (?) mark?

		b		e
	d		a	
	a			c
?				
		c	e	

- A) a B) b C) c D) d E) e

2.

a		e		d
	d			c
			?	
d	b			
		d		

- A) a B) b C) c D) d E) e

3.

	d	c	a	y
				d
		a	b	
		d		
c	e	x		

⇒ x, y = ?, ?

- A) c,b B) b,b C) a,b D) b,d E) b,e

4. Aşağıdaki 6x6 boyutlu tablonun her satır ve sütununda a,b,c,d,e,f harfleri birer kez kullanılmıştır. Buna göre, ? işareti yerine hangi harf gelmelidir?

In 6 x 6 table below, the letters a,b,c,d,e,f are used only once in each row and column. Accordingly, what letter must replace the question (?) mark?

d		a			b
		d			a
b	a				
	e	?	a		
					f
a				b	c

- A) b B) c C) d D) e E) f

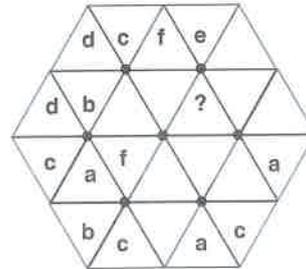
5.

a			c		
		f		?	
	c				
				e	c
c	a		b		
	d	c			

- A) a B) b C) c D) d E) e

6. Aşağıdaki bulmacada her üçgenin içine a,b,c,d,e,f harflerinden birisi yazılacaktır. Her işaretlenmiş noktanın çevresindeki harfler de birbirinden farklı olacaktır. Buna göre, soru(?) işaretinin yerine hangi harf gelecektir?

In the puzzle below, one of the letters a, b, c, d, e, f will be written inside each triangle. The letters around each marked point will also be different. Accordingly, which letter will replace the question mark?



- A) a B) b C) c D) d E) e

1 - B

2 - D

3 - B

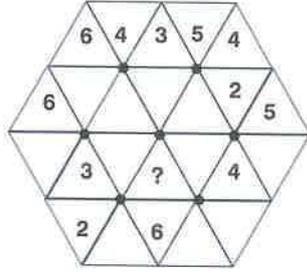
4 - A

5 - C

6 - C

7. Aşağıdaki bulmacada her üçgenin içine 1,2,3,4,5,6 rakamlarından birisi yazılacaktır. Her işaretlenmiş noktanın çevresindeki rakamlar da birbirinden farklı olacaktır. Buna göre, soru(?) işaretinin yerine hangi rakam gelecektir?

In the puzzle below, one of the numbers 1,2,3,4,5,6 will be written inside each triangle. The numbers around each marked point will also be different. Accordingly, which number will replace the question mark?



- A) 5 B) 4 C) 3 D) 2 E) 1

8. Aşağıdaki şekilde her kutuya, her satır ve sütunda 1,2,3,4,5,6 rakamları birer kez yazılacaktır. Buna göre, x yerine hangi rakam yazılmalıdır?

In the figure below, the numbers 1,2,3,4,5,6 are written only once in each row and column. Accordingly, what number must be written in place of x?

	2	6			
					x
5				6	
6		4			
	6				1
	1	3	6		

- A) 2 B) 3 C) 4 D) 5 E) 6

9.

4	5	a	6	1	b
2	3	5	1	6	4
c	1	4	2	3	5
5	d	1	e	2	6
3	2	6	5	f	1
g	6	2	4	5	3

$$a \cdot b + c \cdot d - e \cdot f + g = ?$$

- A) 16 B) 17 C) 18 D) 19 E) 20

10.

				6	
	2		5	b	
		6		1	
			4	5	
4		a	1		3
3				c	

$$a + b - c = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

11.

2	3	1			
3		6			1
5			1		4
	1	5			
1				X	6
	5	3	6		

$$X = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

12.

		4		2	3
1	6		4		
	Y				6
		1	6		2
2		3		6	4
			2	5	

$$Y = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

1. – 3. sorularda verilen sudokularda her satır, sütün ve farklı bölgede 1'den 4'e kadar olan sayılar birer kez kullanılıyor.

In the questions between 1 and 3, numbers from 1 to 4 are used only once in each row, column and different region.

1.

	2		1
	3	4	
A			
	1	B	4

$\Rightarrow A \cdot B = ?$

- A) 2 B) 4 C) 6 D) 9 E) 12

2.

1	3		
	Y	3	
X			4
2			3

$\Rightarrow X - Y = ?$

- A) 1 B) 2 C) 3 D) 0 E) -2

3.

G	2		
	L		3
1		T	
		4	A

$\Rightarrow G + L + T + A = ?$

- A) 6 B) 7 C) 8 D) 9 E) 10

4. – 6. sorularda verilen sudokularda her satır, sütün ve farklı bölgede 1'den 6'ya kadar olan sayılar birer kez kullanılıyor.

In the questions between 4 and 6, numbers from 1 to 6 are used only once in each row, column and different region.

4.

3	x		z		
			2		5
4	5		6		
	6	y		4	1
		2	4	5	
	4	6			2

$\Rightarrow x + y + z = ?$

- A) 5 B) 6 C) 7 D) 8 E) 9

5.

4		6	1		
		2			6
			3	b	
	4	3		1	
1	a				4
2				3	

$\Rightarrow a + b = ?$

- A) 12 B) 16 C) 18 D) 20 E) 24

6.

a	2	4			6
	6		b	3	4
5			6		d
6	c		5		3
2		3		f	
	e			1	

$a - b + c - d + e - f = ?$

- A) a B) b C) c D) d E) e

7. – 9. sorularda verilen sudokularda her satır, sütun ve farklı bölgede 1'den 5'e kadar sayılar birer kez kullanılıyor.

In the sudoku given in the 7th – 9th questions, numbers from 1 to 5 are used once in each row, column and different region.

7.

a		4	5	
	b			1
1	c			3
2		d		
	3	2		e

$$a + b + c - d - e = ?$$

- A) a B) b C) c D) d E) e

8.

2				
			1	
	x	4		
	3			
		y		5

$$x \cdot y = ?$$

- A) 20 B) 16 C) 12 D) 8 E) 4

9.

5		4	a	
	b		2	
	4		5	
2		c		1

$$a + b + c = ?$$

- A) 3 B) 5 C) 7 D) 9 E) 11

10. – 12. sorularda verilen sudokularda her satır, sütun ve farklı bölgede 1'den 6'ya kadar sayılar birer kez kullanılıyor.

In the sudoku given in the 10th – 12th questions, numbers from 1 to 6 are used once in each row, column and different region.

10.

4		1	5		6
					x
		3	1		
		4	3		
5		2	6		4

$$x = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

11.

				5
		2		4
6				
3				2
		a	1	
			6	b

$$a \cdot b = ?$$

- A) 15 B) 16 C) 18 D) 20 E) 30

12.

		4			5
			1	x	
2				4	
	5				6
	y	3			
1			4		

$$x + y = ?$$

- A) 8 B) 9 C) 10 D) 11 E) 12

1. Milli Eğitim Bakanlığı bulaşıcı hastalıklarla mücadelede hazırladığı projeyi uygulamak için Türkiye'nin 81 ilinde 32 okul ve her okul için 8 sınıf belirlemiştir.

Buna göre projeye katılacak toplam sınıf sayısı kaçtır?

To implement the project prepared by the Ministry of Education in the fight against infectious diseases in Turkey's 81 provinces has identified eight classes for 32 schools and each school.

Accordingly, what is the total number of classes to participate in the project?

- A) 8^4 B) 9^4 C) 10^4 D) 11^4 E) 12^4



Yukarıda verilen şekil bir akıllı telefonun ekranında bulunan ve ne kadar şarj olduğunu gösteren simgedir. Bu simge telefonun pilinin doluluk durumuna göre farklı renkler almaktadır. Ayrıca %'lik olarak sayısal ifadesi yazmaktadır. Pildeki renkler doluluk durumuna göre şu şekildedir;

$$\%1 \leq \text{kırmızı} \leq \%10$$

$$\%11 \leq \text{mavi} \leq \%50$$

$$\%51 \leq \text{yeşil} \leq \%100$$

Pilin rengi mavi renkteyken, %20'lik şarj olursa pilin görünümü yeşil, %22'lik şarj kullanılırsa pilin rengi kırmızı olmaktadır.

Alabileceği tamsayı değerleri toplamı kaçtır?

The figure given above is the symbol on the screen of a smartphone that shows how much charge it has. This symbol takes on different colors depending on the battery level of the phone. It also writes the numerical expression in%. The colors on the battery are as follows according to the fullness status;

$$1\% \leq \text{red} \leq 10\%$$

$$11\% \leq \text{blue} \leq 50\%$$

$$51\% \leq \text{green} \leq 100\%$$

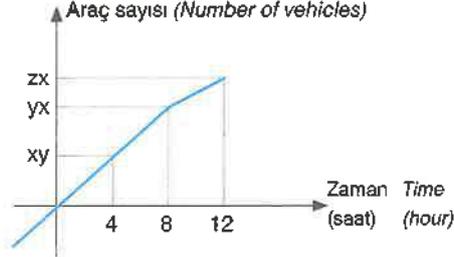
While the color of the battery is blue, the appearance of the battery is green if 20% charged, and red if 22% charge is used.

What is the sum of integer values it can get?

- A) 62 B) 63 C) 64 D) 65 E) 66

3. zx , yx , xy iki basamaklı doğal sayılardır.

zx , yx , xy are two-digit natural numbers.



Hasan oğlu Hüseyin ile Bursa'dan Sivas'a otobüs yoluyla yapmaktadır. İlk dört saat Hasan otobüsün geçtiği araçları saymıştır. Sonraki 12 saat Hüseyin saymıştır. Otobüsün 4. saat ile 8. saat arası 45 araç, 8. saat ile 12. saat arasında 30 araç geçtiği biliniyor. x , y , z sıfırdan farklı rakamlardır.

Buna göre, $x + y + z = ?$

Hasan is traveling by bus from Bursa to Sivas with his son Hüseyin. In the first four hours, Hasan counted the vehicles passing by the bus. Hussein counted the next 12 hours. It is known that the bus passes 45 vehicles between the 4th hour and the 8th hour and 30 vehicles between the 8th and the 12th hour. x , y , z are non-zero numbers.

- A) 14 B) 15 C) 16 D) 17 E) 18

4. Yurt dışına iş seyahatine giden Mecit Bey 4 gün sınırsız konuşma, 3 gün sınırsız internet ve 5 gün sınırsız SMS paketi almıştır. Yapmış olduğu kullanımlarla ilgili ücretlendirme bilgisi aşağıdaki tabloda verilmiştir.

Mecit Bey, who went on a business trip abroad, received 4 days unlimited calls, 3 days unlimited internet and 5 days unlimited SMS packages. The pricing information for the uses it has made is given in the table below.

	Gün (Day)	Günlük Ücret (Daily wages)
Sınırsız Konuşma (Unlimited Talk)	4	25
Sınırsız İnternet (Unlimited internet)	3	50
Sınırsız SMS (Unlimited SMS)	5	20

Buna göre, Mecit Bey kaç günlük internet paketi daha alırsa toplam ödediği faturanın $\frac{1}{5}$ 'i konuşma paketi için verilmiş olur?

Accordingly, if Mecit Bey buys more days of internet package, $\frac{1}{5}$ of the total bill he paid would be given for the talk package?

- A) 1 B) 2 C) 3 D) 4 E) 5

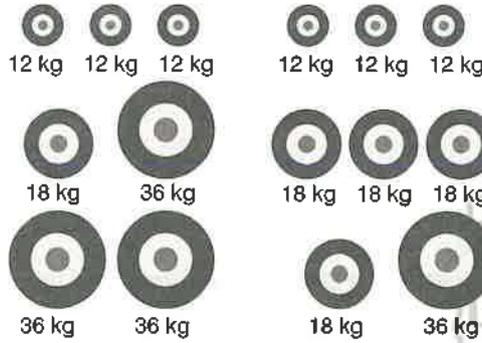
5. Bir arkadaş grubu Doğu Karadeniz turuna gitmeyi düşünmektedir. Tur şirketi, altın ve platin paket olmak üzere iki farklı paket sunmaktadır. Rezervasyon yapıldıktan sonra 15 farklı kişi paketini değiştirmiştir. Bu değişiklik nedeniyle ödenecek olan toplam ücret 375 TL artmıştır.

Platin paketin fiyatı altın paketin fiyatından 125 TL fazla olduğuna göre, platin paketi altın paket ile değiştirmek isteyen kaç kişi vardır?

A group of friends is considering going on an Eastern Black Sea tour. The tour company offers two different packages, gold and platinum packages. 15 different people changed the package after the reservation was made. The total fee to be paid due to this change has increased by TL 375.

Since the price of the platinum package is 125 TL higher than the price of the gold package, how many person would like to replace the platinum package with a gold package?

- A) 6 B) 7 C) 8 D) 9 E) 10

6. 
- Fatih'in Kullandıkları Uğur'un Kullandıkları

Fatih ve Uğur'un spor salonunda çalıştıkları ağırlıklar yukarıdaki gibidir. İkiisi toplam 306 kg ağırlıkla çalışmaktadır. Spor salonuna sonradan gelen Berk ağırlık çalışmaya başlamıştır. Fatih ve Uğur kendi ağırlıklarından çalışması için Berk'e vermiştir. Son durumda her biri için toplam ağırlığın $\frac{1}{3}$ 'ü olacak şekilde paylaşım yapılmıştır.

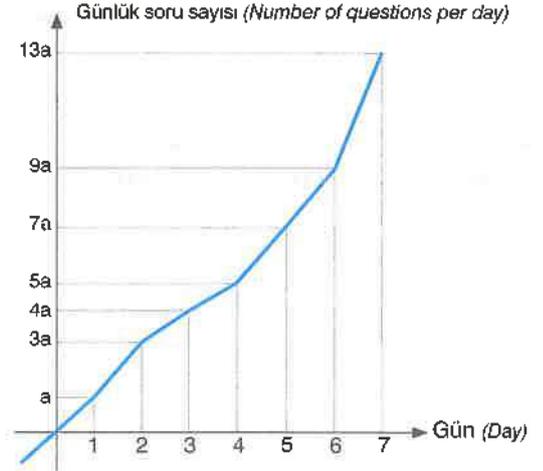
Buna göre, Berk kaç tane ağırlıkla çalışmıştır?

The weights that Fatih and Uğur work in the gym are as above. Two of them work with a total weight of 306 kg. Berk, who came to the gym later, started weight training. Fatih and Uğur gave their weight to Berk to work. In the last case, it was shared as $\frac{1}{3}$ of the total weight for each.

Accordingly, how many weights Berk has worked.

- A) 3 B) 4 C) 5 D) 6 F) 7

7.



Mahsum, YÖS'e hazırlanmaktadır. Ömer öğretmen Mahsum'a hergün için 90 soru olacak şekilde bir haftalık soru hedefi vermiştir. Mahsum 7 günün sonunda toplam soru hedefine ulaşmıştır.

Mahsum günlük hedefini geçtiği ilk gün kaç soru çözmüştür?

Mahsum is preparing for YÖS. Ömer teacher gave Mahsum a weekly question goal with 90 questions per day. At the end of 7 days, the total question has reached its goal.

How many questions did Mahsum solve on the first day it passed its daily target?

- A) 95 B) 100 C) 105 D) 110 E) 115

8. Galata Eğitim 150 öğrencisi için kitap setleri hazırlanmaktadır. Her bir set içinde 3 veya 4 kitap bulunmaktadır. Kitapları öğrencilere dağıtmadan 20 tane setin kitap sayısında 6 kitap olacak şekilde değişikliğe gidilmiştir. Son durumda kitap sayısı 515'ten 563'e çıkmıştır.

Buna göre, 4 kitaptan oluşan kaç sette değişiklik yapılmıştır?

Galata Education prepares book sets for 150 students. There are 3 or 4 books in each set. Without distributing the books to the students, the number of books of 20 sets was changed to 6 books. In the last case, the number of books increased from 515 to 563.

Accordingly, how many sets of 4 books were changed?

- A) 9 B) 10 C) 11 D) 12 E) 13

1. TV'de yayınlanan bir yarışma programında yarışmacı bilemediği soru için seyirciye sorma joker hakkını kullanmıştır. Seyirci A, B, C, D seçeneklerinden sadece birini işaretleyerek cevap verecektir.

C seçeneğine cevap verenlerin sayısı;

- A seçeneğine cevap verenlerin sayısının 3 katı.
- B seçeneğine cevap verenlerin sayısının 4 katı.
- D seçeneğine cevap verenlerin sayısının 6 katıdır.

B seçeneğini işaretleyen 24 kişi olduğuna göre, yarışmada kaç seyirci vardır?

In a competition program broadcast on TV, the contestant used the right to ask the audience for a question he could not know. The audience will answer by ticking only one of the options A, B, C, D.

The number of respondents to option C;

- 3 times the number of respondents to option A.
- 4 times the number of respondents to option B.
- 6 times the number of respondents to option D.

Since there are 24 people who selected option B, how many spectators are there in the competition?

- A) 168 B) 172 C) 184 D) 196 E) 214

2. Berke Galata yayınlarından aldığı IQ soru bankası kitabını 4 hafta içinde bitirmeyi planlamaktadır.

1. hafta $\frac{2}{5}$ 'sini, 2. hafta kalanın $\frac{1}{3}$ 'ünü, 3. hafta kalanın $\frac{1}{2}$ 'ini, 4. hafta kalanın $\frac{3}{4}$ 'ünü çözmüştür. Geriye 120 soru kalmıştır.

Buna göre, Galata IQ soru bankası kitabında kaç soru vardır?

Berke plans to finish the IQ question bank book, which he bought from his publications, within 4 weeks.

He solved $\frac{2}{5}$ of the questions in the 1st week, $\frac{1}{3}$ of the remaining questions in the 2nd week, $\frac{1}{2}$ of the remaining questions in the 3rd week, and $\frac{3}{4}$ of the remaining questions in the 4th week. There are 120 questions left.

Accordingly, how many questions are in the Galata IQ question bank book?

- A) 1200 B) 1500 C) 1800
D) 2100 E) 2400

3. Ayça'nın elinde 810.000 TL'si vardır. Ayça kendisine bir iş kurmak istemektedir. Kuracağı iş için her seferinde elindeki paranın $\frac{1}{3}$ 'ünü kullanmaktadır. İş kurmak için yapmış olduğu 4 girişimden de başarısız olmuştur.

Ayça'nın elinde kalan para ne kadardır?

Ayça has 810.000 TL. Ayça wants to establish a business for herself. She uses $\frac{1}{3}$ of the money she has at a time for her business. She has failed in all 4 attempts she has made to start a business. How much money is left?

- A) 80.000 TL B) 160.000 TL C) 240.000 TL
D) 360.000 TL E) 540.000 TL

4. Ahmet a ve b dizilerini takip etmektedir. Ahmet'in x GB internet kotası vardır.

- a dizisinin her bölümü eşit miktarda internet harcamaktadır.
- b dizisinin her bölümü eşit miktarda internet harcamaktadır.
- a ve b dizilerinin harcadığı internet miktarı birbirinden farklıdır.

x GB kota ile a ve b dizilerinin her ikisinin birlikte kaç bölüm izlenebileceği aşağıdaki tabloda verilmiştir.

Ahmet follows the series a and b. Ahmet has x GB internet quota.

- Each episode of the series a spends an equal amount of internet.
- Each episode of the b series spends an equal amount of internet.
- The amount of internet spent by a and b series is different from each other.

With x GB quota, how many episodes can be watched together for both a and b series is given in the table below.

x GB ile izlenebilen toplam bölüm sayısı (Total number of episodes that can be watched with x GB)	a x 4 b x 3
x GB ile izlenebilen toplam bölüm sayısı (Total number of episodes that can be watched with x GB)	a x 6 b x 2

Buna göre, Ahmet x GB internet kotasıyla sadece b dizisini izlemek isteseydi kaç bölüm izleyebilirdi?

Accordingly, if Ahmet wanted to watch only b series with x GB internet quota, how many episodes could he watch?

- A) 5 B) 6 C) 7 D) 8 E) 9

5. Yiğit içinde 62 litre süt bulunan 90 litrelik bidonu 7 litrelik sürahi ile bidonun içinde boşluk kalmayacak şekilde süt ile doldurmuştur.

Yigit filled the 90-liter jug containing 62 liters of milk with milk in a 7-liter jug without leaving any space in the container.



7 litrelik sürahiyi her seferinde tam doldurmuş ve sürahinin tamamını bidona boşaltmıştır. Daha sonra 5 litrelik süt paketlerini süt ile doldurmuştur.

Bidonda 25 litre süt kaldığına göre 5 litrelik kaç tane paket olmuştur?

He completely filled the 7 liter jug each time and emptied the entire jug into the can. He then filled the 5 liter milk packages with milk.

Since there is 25 liters of milk in the can, how many packages of 5 liters are there?

- A) 11 B) 12 C) 13 D) 14 E) 15

6. Bir temizlik firması yeni ürettiği bir temizlik ürününü test etmiştir. Yaptığı test sonucunda ürün her uygulamada mikropların $\frac{3}{5}$ 'ini yok ettiği saptanmıştır.

1.000.000 mikrop varken 5 kez uygulanırsa kaç mikrop kalır?

A cleaning company has tested a newly produced cleaning product. As a result of its test, it has been determined that the product destroys $\frac{3}{5}$ of the microbes in each application.

If applied 5 times when there are 1,000,000 microbes, how many microbes will remain?

- A) 3.2^{11} B) 4.2^{11} C) 5.2^{11} D) 6.2^{11} E) 7.2^{11}

7. Bir bilet kuyruğunda bekleyenler için aşağıdaki bilgiler bilinmektedir.

- Ali baştan 28. sıradadır.
- Aydın sondan 28. sıradadır.
- Ali ile Aydın arasında 7 kişi vardır.

Bu kuyrukta en az ve en çok bulunan kişi sayıları toplamı kaçtır?

For those waiting in a ticket queue, the following information is known.

- Ali is 28th from the beginning.
- Aydın is 28th from the end.
- There are 7 people between Ali and Aydın.

What is the sum of the lowest and highest number of people in this queue?

- A) 107 B) 108 C) 109 D) 110 E) 111

8. Bir şarkı yarışmasını değerlendirmek için jüri bütün rakamları kullanmaktadır.

Yarışmaya katılan 69 yarışmacı olduğuna göre, aynı dereceye giren en çok kaç yarışmacı olabilir?

To evaluate a song contest, the jury uses all the numbers.

Since there are 69 competitors participating in the competition, how many competitors can be in the same rank at most?

- A) 59 B) 60 C) 61 D) 62 E) 63

1. Bir telin, bir ucundan $\frac{2}{5}$ 'si, diğer ucundan $\frac{1}{3}$ 'ü kesilirse orta nokta ilk konumuna göre 7 cm yer değiştirmektedir.

Buna göre, telin boyu ne kadardır?

If $\frac{2}{5}$ of a wire is cut from one end and $\frac{1}{3}$ of the other end, the midpoint is displaced by 7 cm compared to its initial position.

What is the length of the wire?

- A) 175 B) 180 C) 195 D) 200 E) 210

2. Bir sınıfta öğrenciler sıralara 3'er kişi oturursa 4 kişi ayakta kalıyor. 5'er kişi otururlarsa 8 sıra boş kalıyor.

Buna göre, sınıfta kaç öğrenci vardır?

In a classroom, if students sit 3 people on each row, 4 people stand. If 5 people sit, 8 rows remain empty.

How many students are in the class?

- A) 70 B) 72 C) 74 D) 76 E) 78

3. YÖS'e hazırlanan Ahmet hergün bir önceki günden 5 fazla soru çözmektedir.

Ahmet 26. günde 1. gün çözdüğü sorunun 6 katı kadar soru çözdüğüne göre Ahmet 4. gün kaç soru çözmüştür?

Preparing for YÖS, Ahmet solves 5 more questions everyday than the previous day.

Since Ahmet solved 6 times the problem on the first day on the 26th day, how many questions did Ahmet solve on the 4th day?

- A) 35 B) 37 C) 40 D) 43 E) 45

4. Emel öğretmenin 12 öğrencisi öğretmenler gününde hediye almayı planlamaktadır. Hediye tutarı 12 eş parçaya bölünecektir. Fakat 4 öğrencinin yeterli parası olmadığı için planlanan tutarın $\frac{1}{3}$ 'ünü verebilmiştir. Diğer 8 öğrenci kalan tutarı aralarında eşit paylaşmıştır.

8 öğrenci ilk planlarına göre 4 lira daha fazla para verdiği göre, hediye kaç liradır?

12 students of Emel teacher are planning to buy gifts on teachers' day. The gift amount will be divided into 12 equal parts. However, since 4 students did not have enough money, they were able to give $\frac{1}{3}$ of the planned amount. The other 8 students shared the remaining amount equally.

Since 8 students gave 4 liras more than their initial plan, how much is the gift?

- A) 96 B) 100 C) 121 D) 144 E) 156

5. Nihat bir merdivenin basamaklarını üçer üçer çıkıp dörder dörder inmiştir.

Merdivenleri inerken 17 adım daha az attığına göre, merdiven kaç basamaklıdır?

Nihat climbed the steps of a staircase 3 by 3 and went down 4 by 4.

Since he takes 17 fewer steps while descending the stairs, how many steps does the ladder have?

- A) 192 B) 204 C) 216 D) 228 E) 240

6. 45 yaşındaki Hülya hanımın Serdar ve Mert adında iki oğlu vardır. Yaşı büyük olan Serdar, Mert'e "Ben annenim yaşına geldiğimde sen 39 yaşında olacaksın" diyor.

Buna karşılık Mert, Serdar'a "Ben senin şimdiki yaşına geldiğimde sen 24 yaşında olacaksın" diyor.

Buna göre Mert ve Serdar'ın bugünkü yaşları toplamı kaçtır?

Hülya, 45 years old, has two sons named Serdar and Mert. Serdar, who is older, tells Mert, "When I reach my mother's age, you will be 39 years old."

On the other hand, Mert says to Serdar, "When I reach your present age, you will be 24 years old."

According to this, what is the total age of Mert and Serdar today?

- A) 12 B) 18 C) 24 D) 30 E) 36

7. Polat, Elif'in bugünkü yaşındayken, Polat'ın yaşı Elif'in yaşının $\frac{3}{2}$ 'sidir.

Polat ile Elif'in yaşları farkı 12 olduğuna göre, Elif'in bugünkü yaşı kaçtır?

When Polat is Elif's current age, Polat's age is $\frac{3}{2}$ of Elif's age.

Since the age difference of Polat and Elif is 12, what is Elif's age today?

- A) 16 B) 18 C) 24 D) 28 E) 36

8. Fatih'in yaşı dörder yıl arayla doğmuş 3 çocuğunun bugünkü yaşları toplamının iki katıdır. Fatih bugün 54 yaşındadır.

Eğer ikinci çocuğu birinci çocuktan 5 yıl sonra, üçüncü çocuk ikinci çocuktan 5 yıl sonra doğmuş olsaydı çocukların bugünkü yaşları toplamı kaç olurdu?

The age of Fatih is twice the current age of his 3 children who were born four years apart. Fatih is 54 years old today.

If the second child was born 5 years after the first child and the third child was born 5 years after the second child, what would be the total age of the children today?

- A) 21 B) 24 C) 27 D) 30 E) 32

9. Zeynep hanımın bugünkü yaşı, yaşları 3, 4, 5 ile orantılı olan üç çocuğunun yaşları toplamına eşittir.

5 yıl sonra çocuklarının yaşları toplamının aritmetik ortalaması 17 olduğuna göre, Zeynep hanımın yaşı ilk çocuğu doğduğunda kaçtır?

The current age of Mrs. Zeynep is equal to the total ages of her three children whose ages are proportional to 3, 4, and 5 years.

Since the arithmetic mean of the total age of her children after 5 years is 17, what is the age of Zeynep when her first child is born?

- A) 19 B) 20 C) 21 D) 22 E) 23

10. • Fuat'ın yaşı, Özkan'ın yaşının üç katıdır.

• Özkan ise Mazhar'dan 5 yaş küçüktür.

• Özkan, Mazhar'a "Sen Fuat'ın yaşına geldiğinde bende şimdiki yaşımın iki katına gelmiş olacağım" demiştir.

Buna göre, Fuat bugün kaç yaşındadır?

• *Fuat's age is three times Özkan's age.*

• *Özkan is 5 years younger than Mazhar.*

• *Özkan said to Mazhar, "When you are Fuat's age, I will be twice my current age."*

How old is Fuat today?

- A) 10 B) 12 C) 15 D) 18 E) 20

11. İki kuzen Mesut ile Faruk arasında yaşları ile ilgili şöyle bir konuşma geçmektedir.

• Faruk: "Ben 2012 yılında doğum yılımın rakamları toplamı yaşındaydım." demiştir.

• Mesut: "Sen doğduğunda ben 6 yaşındaydım." demiştir.

Buna göre, 2021 yılında mesut kaç yaşında olur?

There is a conversation between the two cousins Mesut and Faruk about their age.

• Faruk: "I was the sum of the numbers for my birth year in 2012." he said.

• Mesut: "I was 6 when you were born." he said.

Accordingly, how old will be happy in 2021?

- A) 37 B) 38 C) 39 D) 40 E) 41

12. 2 çocuklu bir ailenin yaşları hakkında aşağıdaki bilgiler bilinmektedir.

• Birinci çocuk doğduğunda baba 27 yaşındadır.

• İkinci çocuk doğduğunda anne 30 yaşındadır.

İki çocuk arasındaki yaş farkı 5 olduğuna göre, anne ile baba arasındaki yaş farkı kaçtır?

The following information is known about the ages of a family with 2 children.

• *When the first child is born, the father is 27 years old.*

• *When the second child is born, the mother is 30 years old.*

Since the age difference between the two children is 5, what is the age difference between the mother and father?

- A) 1 B) 2 C) 3 D) 4 E) 5

1. Ege gezisine çıkan bir grupta farklı yaşlarda kişiler vardır.
- Yaşı en büyük olan 78 yaşında, yaşı en küçük olan 3 yaşındadır.
 - 3 yaşındaki çocukla 25 yaşındaki annesi gruptan ayrılınca grubun yaş ortalaması 54 olmuştur.
 - Anne ve çocuk grubu katıldıktan sonra en yaşlı üye gruptan ayrılınca grubun yaş ortalaması 41 olmaktadır.

Buna göre, bu grupta kaç kişi vardır?

There are people of different ages in a group that goes on an Aegean tour.

- *The oldest is 78 years old, the youngest is 3 years old.*
- *When the 3-year-old child and the 25-year-old mother left the group, the average age of the group became 54.*
- *After the mother and child group joins, when the oldest member leaves the group, the average age of the group becomes 41.*

How many people are in this group?

- A) 6 B) 7 C) 8 D) 9 E) 10

2. İlhami beyin yaşı,
- Büyük oğlunun yaşının 3 katının bir fazlasıdır.
 - Küçük oğlunun yaşının 5 katına eşittir.
 - İlhami Bey: "Küçük oğlum iki yıl önce doğmuş olsaydı bugünkü yaşının 4 katı benim bugünkü yaşıma eşit olurdu." demiştir.

Buna göre, İlhami Bey'in büyük oğlu bugün kaç yaşındadır?

Mr. İlhami age,

- *He is over 3 times the age of his older son.*
- *It is equal to 5 times the age of the youngest son.*
- *Mr. İlhami: "If my younger son was born two years ago, he would be 4 times his age today." he said.*

Accordingly, how old is Mr. İlhami's eldest son today?

- A) 8 B) 10 C) 11 D) 12 E) 13

3. Ahmet Bey yeni aldığı iş için eş kapasiteli 5 işçi almıştır. İşin zamanında bitirilebilmesi için ikinci günden itibaren her geçen gün çalışma hızı bir önceki gün işe aldığı işçinin iki katı olan yeni bir işçiyi ekibine eklemiştir.

Bu şekilde işi 5. günün sonunda bitirmiştir.

Eğer 1. gün olan 5 işçi ile çalışmış olsaydı işi kaç günde bitirebilirdi?

Ahmet has recruited 5 workers with equal capacity for his new job. In order to be able to complete the job on time, it has added a new worker to its team, whose working speed is twice that of the previous day. In this way, he finished the job at the end of the 5th day.

If he had worked with 5 workers on the 1st day, in how many days would he finish the job?

- A) 13 B) 14 C) 15 D) 16 E) 17

4. Eşit kapasiteli 8 işçi bir işe başlıyor.

Her gün 2 işçi işten ayrılırken kalan işçiler kapasitelerini iki katına çıkararak işi 3. günün sonunda bitirebiliyor.

Buna göre ilk günkü çalışma hızında 6 işçi bu işi kaç günde bitirebilirdi?

8 workers of equal capacity start a job. While 2 workers quit every day, the remaining workers can double their capacity and finish the job at the end of the 3rd day.

Accordingly, in how many days could 6 workers finish this job at the working speed of the first day?

- A) 5 B) 6 C) 7 D) 8 E) 9

5. 75 kişilik bir izci grubuna 30 gün yetecek kumanya vardır. 10 kişi 7 gün sonra, 25 kişi ise 12 gün sonra kampa ayrılmıştır.

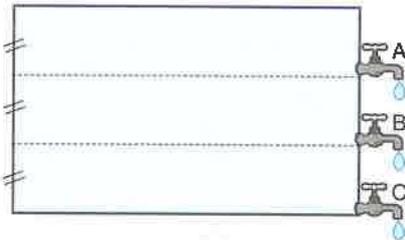
Kalan yiyecekler kampa bulunan izcilere kaç gün daha yeter?

There is enough food for a group of 75 scouts for 30 days. 10 people left the camp after 7 days and 25 people after 12 days.

How many more days will the remaining food be enough for the scouts in the camp?

- A) 15 B) 20 C) 25 D) 30 E) 35

6.



Şekildeki A, B, C eş kapasiteli muslukları tabandan itibaren yükseklikleri eşit üç noktadan dolu havuzu boşaltmaktadır.

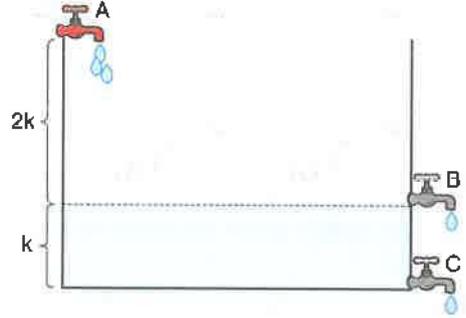
Havuz dolu iken üç musluk 22 saatte boşaltabildiğine göre, tam dolu havuzu sadece B ve C muslukları kaç saatte boşaltabilir?

The taps with equal capacities A, B, C in the figure discharge the pool filled from three equal heights from the bottom.

Since three taps can empty in 22 hours when the pool is full, how many hours can only taps B and C empty the fully filled pool?

- A) 23 B) 24 C) 25 D) 26 E) 27

7.



Şekildeki gibi A musluğu havuzu doldururken özdeş B ve C musluğu havuzu boşaltmaktadır.

A musluğu B musluğunun kapasitesinin 3 katıdır.

A musluğu boş havuzu tek başına 12 saatte doldurabilmektedir.

Havuz şekildedeki kadar doluyken üç muslukta aynı anda açılırsa kalan kısım kaç saatte dolar?

As in the figure, while tap A fills the pool, identical tap B and C empty the pool. Tap A is 3 times the capacity of tap B. Tap A can fill the empty pool in 12 hours alone.

When the pool is as full as shown, if all three taps are opened at the same time, how many hours does the rest fill?

- A) 12 B) 15 C) 18 D) 24 E) 27

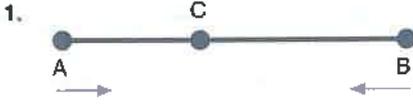
8. Eş kapasitedeki 3 musluk bir havuzu 12 saatte doldurabilmektedir. Havuz boş iken üç musluk aynı anda açılıyor.

Ne kadar süre geçtikten sonra musluklardan biri kapatılırsa havuz toplam 15 saatte dolar?

3 taps of equal capacity can fill a pool in 12 hours. When the pool is empty, three taps are turned on at the same time.

After how long has one of the taps turned off, the pool fills in 15 hours?

- A) 4 B) 5 C) 6 D) 7 E) 8



A ve B kentlerinden iki araç şekildeki gibi aynı anda birbirlerine doğru harekete başlıyor ve belli bir süre sonra C noktasına karşılaşıyorlar.

A kentinden harekete başlayan araç karşılaştıktan 6 saat sonra B kentine, B kentinden harekete başlayan araç karşılaştıktan 160 dakika sonra A kentine ulaşıyor.

Buna göre, bu araçlar harekete başladıktan kaç dakika sonra karşılaşmışlardır?

Two vehicles from cities A and B start moving towards each other at the same time as shown in the figure, and after a certain period of time, they encounter point C. The vehicle that starts moving from city A reaches city B 6 hours after the encounter, and the vehicle that starts moving from city B reaches city A 160 minutes after the encounter.

Accordingly, how many minutes after these vehicles started to move?

- A) 160 B) 180 C) 200 D) 220 E) 240

2. Semih farklı bir şehirde yaşayan arkadaşı Hakan'ı ziyaret etmek istiyor.

Haritadan gideceği güzergahı planlayınca sabah belli bir saatte 90 km/saat hızla giderse saat 13'te, 60 km/saat hızla giderse saat 16'da Hakan'ın yanına varıyor.

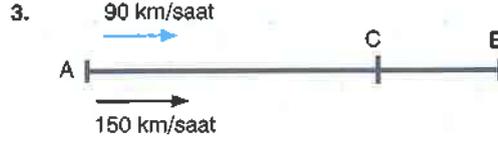
Semih planladığı saatte yola çıkınca 14:30'da Hakan'ın yanına varmıştır.

Buna göre, Semih'in saatteki hızı kaçtır?

Semih wants to visit his friend Hakan, who lives in a different city. When he plans his route from the map, if he goes 90 km/h at a certain hour in the morning, he will arrive at Hakan at 13 o'clock, and at 16 o'clock if he goes at 60 km/h. When Semih set out at the planned time, he arrived at Hakan at 14:30.

So what is the speed of Semih per hour?

- A) 66 B) 72 C) 74 D) 76 E) 82

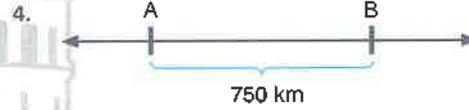


Hızları saatte 150 km ve 90 km olan iki araç A kentinden aynı anda harekete geçiyor. Hızlı olan araç B kentine varıp geri dönüyor ve C kentinde bu iki araç karşılaşıyor.

Buna göre, $\frac{|BC|}{|AC|} = ?$

Two vehicles with speeds of 150 km per hour and 90 km per hour set off from city A at the same time. The fast vehicle arrives and returns to city B and these two vehicles meet in city C.

- A) $\frac{1}{2}$ B) $\frac{1}{3}$ C) $\frac{2}{3}$ D) $\frac{1}{4}$ E) $\frac{3}{4}$



Şekildeki A ve B noktaları arasındaki uzaklık 750 km'dir.

A ve B noktalarında bulunan iki araç birbirine doğru hareket ederse 5 saatte karşılaşıyor. Aynı yönde hareket ederlerse hızlı olan araç yavaş olan aracı 15 saatte yakalıyor.

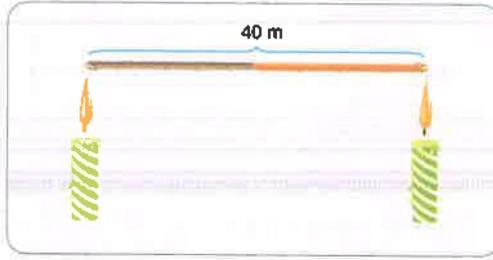
Buna göre, hızlı olan aracın hızı saatte kaç km'dir?

The distance between points A and B in the figure is 750 km. If two vehicles at points A and B move towards each other, they meet in 5 hours. If they move in the same direction, the fast vehicle catches the slower vehicle in 15 hours.

Accordingly, what is the speed of the fast vehicle in kilometers per hour?

- A) 60 B) 90 C) 100 D) 120 E) 150

5.



Yarınsına yanıcı madde sürülmüş 40 metre uzunluğundaki bir ip aynı anda iki ucundan yakılıyor.

Yanıcı maddenin sürüldüğü kısımda ateşin ipte ilerleme hızı saniyede 4 metre, diğer tarafta saniyede 2 metredir.

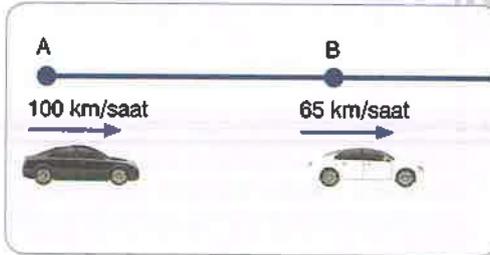
İpin tamamı kaç saniyede yanar?

A 40-meter-long rope, half of which is covered with flammable material, is burned at both ends at the same time. In the part where the flammable substance is applied, the speed of the fire on the rope is 4 meters per second, and 2 meters per second on the other side.

How many seconds does the whole thread burn?

- A) 7 B) $\frac{20}{3}$ C) 8 D) $\frac{17}{2}$ E) 9

6.



A ve B noktalarından iki araç şekildeki gibi saatte 100 km ve 65 km hızla aynı anda aynı yöne doğru harekete başlıyor.

Hızlı olan araç yavaş olanı 6 saatte yakaladığına göre A ile B arası kaç km'dir?

From points A and B, two vehicles start moving in the same direction at the same time at a speed of 100 km/h and 65 km as shown in the figure.

Since the fast one catches the slower one in 6 hours, how many km is it between A and B?

- A) 165 B) 180 C) 195 D) 210 E) 220

7. Boyları 60 cm ve 40 cm olan iki mumdan birincisi 10 saatte ikincisi 20 saatte tamamen yanmaktadır.

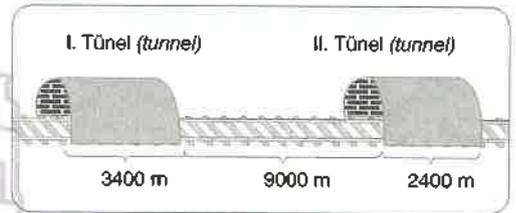
Aynı anda yakılan iki mum kaç saat geçtiğinde 1. mumun uzunluğu 2. mumun uzunluğuna oranı $\frac{1}{2}$ olur?

The first of the two candles, 60 cm and 40 cm in length, burns completely in 10 hours and the second in 20 hours.

How many hours have passed when two candles burned at the same time, the ratio of the length of the 1st candle to the length of the 2nd candle is $\frac{1}{2}$?

- A) 4 B) 5 C) 6 D) 7 E) 8

8.



Uzunlukları sırasıyla 3400 metre ve 2400 metre olan iki tünelden birincisinin bitişi ile ikincinin başlangıcı arası mesafe 9000 metredir.

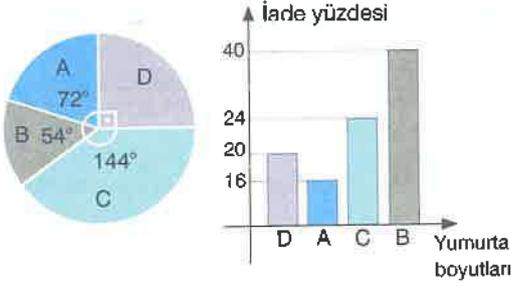
Uzunluğu 200 metre ve saatteki hızı 90 km olan bir tren I. tünelden girip II. tünelden tamamen çıktığı anda kaç dakika geçer?

The distance between the end of the first and the beginning of the second of the two tunnels, which are 3400 meters and 2400 meters in length, respectively, is 9000 meters.

How many minutes pass when a train with a length of 200 meters and a speed of 90 km per hour enters through the 1st tunnel and exits the 2nd tunnel completely?

- A) 10 B) 12 C) 14 D) 16 E) 18

1.



Bir yumurta üreticisi yumurtaları boyutlarına göre A, B, C, D şeklinde sınıflandırmıştır. Üretici yumurtaları 30'luk paket şeklinde satmakta iki hafta sonra satılmayan yumurtaları geri almaktadır.

Dairesel grafikte üretilip satılan yumurtaların dağılımı gösterilmiştir. İkinci grafikte ise iade alınan yumurtaların yüzdelik dağılımı vardır. A boyutundaki yumurtalardan 96 paketi satılmış, iki hafta sonra B boyutundaki yumurtalardan 60 paket iade alınmıştır.

Buna göre C ve D boyutundaki yumurtalardan toplam kaç paket satılmıştır?

An egg producer classified the eggs according to their size as A, B, C, D. The producer sells the eggs in packs of 30 and takes back unsold eggs after two weeks.

The distribution of eggs produced and sold is shown in the circular chart. In the second graph, there is the percentage distribution of returned eggs. 96 packs of A size eggs were sold, and 60 packs of B size eggs were returned two weeks later.

Accordingly, how many packages of C and D size eggs were sold?

- A) 256 B) 285 C) 312 D) 324 E) 356

2. Kilogramı 20 TL olan kuru üzüm ile kilogramı 60 TL olan fındık karıştırılıyor.

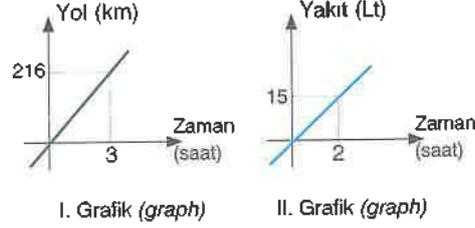
Elde edilen karışımın kilogramı 30 TL olduğuna göre 1 kilogramlık karışımın kaç gramı fındıktır?

Raisins of 20 TL per kilogram and hazelnuts of 60 TL per kilogram are mixed.

Since the kilogram of the mixture is 30 TL, how many grams of a 1 kilogram mixture is hazelnuts?

- A) 250 B) 300 C) 450 D) 500 E) 750

3.



I. grafik bir aracın zamana bağlı aldığı yolu, II. grafik ise zamana bağlı tükettiği yakıtı vermektedir.

Buna göre bu araç 288 km yol aldığı anda kaç litre yakıt tüketir?

graphic I give the path that a vehicle takes depending on time and graphic II gives the fuel it consumes depending on time.

Accordingly, how many liters of fuel does this vehicle consume when traveling 288 km?

- A) 20 B) 22,5 C) 30 D) 32,5 E) 35

4. Yeşim Hanım'ın helva yapmak için internetten bulduğu tarifin içindeki malzemeler ve miktarları şunlardır;

The ingredients and quantities of the recipe that Yeşim Hanım found online to make halva are as follows;

- 0,2 litre yağ (oil)
- 0,5 kg un (flour)
- 0,15 kg şeker (sugar)

Yaptığı helva için elindeki 1 litre yağın hepsini kullanabilmesi için kaç kg una ihtiyacı vardır?

How many kg of flour does she need to use all of the 1 liter of oil she has for the helva she makes?

- A) 2 B) 2,5 C) 3 D) 3,5 E) 4

5. Bir satıcı pazara 2,4 liradan satmak üzere yumurta getirmiştir.

Fakat 40 tanesini getirirken kırmıştır.

Planladığı geliri elde edebilmek için kalan yumurtaları tanesini 3 liradan satmıştır.

Buna göre pazara kaç tane yumurta getirmiştir?

A seller brought an egg to the market to sell for 2.4 liras. But he broke 40 of them while he was bringing them. He sold the remaining eggs for 3 liras in order to get the income he planned.

Accordingly, how many eggs did he bring to the market?

- A) 120 B) 150 C) 180 D) 200 E) 240

6. Bir sütçü 25 litre süte 5 litre su katarak satıyor. Bu durumda su katılmamış durumdaki hesapladığı satış fiyatından 50 kuruş daha ucuza satıp toplamda aynı parayı kazanıyor.

Buna göre süte su katılmadan önceki halinde 1 litre-si kaç liradır?

A milkman sells it by adding 5 liters of water to 25 liters of milk. In this case, it sells 50 cents cheaper than the sale price calculated in the undiluted state and earns the same money in total.

Accordingly, how much is 1 liter of milk before water is added?

- A) 2 B) 2,5 C) 3 D) 3,5 E) 4

7. Bir yarışta 1. gelen koşucu yarışı 2. gelen koşucudan 75 metre, 3. gelen koşucudan ise 86 metre önde bitiriyor. 2. gelen koşucu bu yarışı 3. gelen koşucudan 16 metre önde bitirdiğine göre, yarış pisti kaç metre uzunluğundadır?

In a race, the first runner finishes the race 75m ahead of the second runner but 86m ahead of the third runner. In addition, if the second runner finishes this race 16m ahead of the third runner, what is the length of the race track?

- A) 160 B) 180 C) 240 D) 300 E) 360

8. Ali, 72 sayısından başlayarak önce ileriye doğru altışar altışar sayıp üç basamaklı KLM sayısına ulaşıyor. Ali bu sayıya ulaştıktan sonra, geriye doğru dörder dörder sayarak 134 sayısına ulaşıyor.

Bu şartı sağlayan en küçük KLM sayısı için L kaçtır?

Ali, starts counting from 72, forward six by six and he reaches the three digit number KLM. Then Ali starts counting from this number, backward four by four and he reaches the number 134.

If the number KLM is the smallest such number, what is the value of L?

- A) 1 B) 2 C) 3 D) 4 E) 5

1. Beş soruluk bir ankette A,B,C,D,E yanıtlarından biri verilmesi gerekmektedir. Aşağıdaki tabloda Ege, Ferit, Ali, Cem ve Deniz'in bu ankete vermiş oldukları yanıtların bazıları vardır.

One of the answers A, B, C, D, E should be given in a five-question questionnaire. The table below contains some of the responses of Ege, Ferit, Ali, Cem, and Deniz to this questionnaire.

	1. soru (question)	2. soru (question)	3. soru (question)	4. soru (question)	5. soru (question)
Ege	E	D			
Ferit		A	E		
Ali	B			C	
Cem					
Deniz		B	D	E	

Tablo tamamen doldurulduğunda satır ve sütunda hiçbir harf tekrarı olmadığına göre Ali'nin 5. soruya verdiği cevap nedir?

When the table is completely filled, as there are no letter repetitions in the row and column. What is Ali's answer to question 5?

- A) E B) A C) B D) D E) C

2. Şekildeki tablonun A, B, C, D, E sütunlarına 1 den başlayıp 3' er 3' er artış gösteren sayılar yerleştirilmiştir.

Numbers starting from 1 and increasing by 3 each are placed in the A, B, C, D, E columns of the table in the figure.

	A	B	C	D	E
1. satır (row 1)	1	4	7	10	13
2. satır (row 2)	16	19	22	25	28
3. satır (row 3)	31	34	37	40	43
⋮	⋮	⋮	⋮	⋮	⋮

Buna göre 577 sayısı hangi satır ve sütunda bulunur?

According to this, in which row and column is the number 577 found?

- A) 39-D B) 40-D C) 38-C D) 39-C E) 40-C

- 3 - 4 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 3 - 4 according to the information below.

Yukarıdaki sayı tablosunda boş olan kutulara 6, 7, 8, 9, 10, 11, 12, 13, ve 14 sayıları satır, sütun ve köşegen toplamları eşit olacak şekilde yerleştirilecektir.

In the above table of numbers, the numbers 6, 7, 8, 9, 10, 11, 12, 13, and 14 will be placed in the empty boxes such that the sum of rows, columns, and diagonals are equal.

3. Sayılar istenildiği gibi yerleştirilirse bir satırda bulunan sayılar toplamı kaçtır?

If the numbers are placed as desired, what is the sum of the numbers in a row?

- A) 20 B) 25 C) 30 D) 35 E) 40

4. Sayılar istenildiği gibi yerleştirilirse orta kutuda bulunan sayı kaçtır?

If the numbers are placed as desired, what is the number in the middle box?

- A) 9 B) 10 C) 11 D) 12 E) 13

5. Bazı kutucukları dolu olan aşağıdaki tablonun her kutusunda bir sayı vardır.

There is a number in each box of the table below, with some boxes filled.

9	29	
17		33

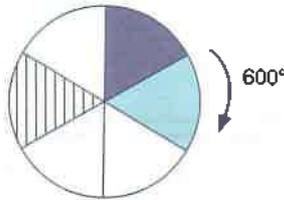
Tablonun boş kısımlarında her satır, her sütun ve her köşegendeki sayılar toplamı aynı sayıya eşittir. Buna göre orta kutucuktaki sayı kaçtır?

In the blank parts of the table, the sum of the numbers in each row, column, and diagonal equal the same number. So what is the number in the middle box?

- A) 5 B) 9 C) 13 D) 25 E) 21

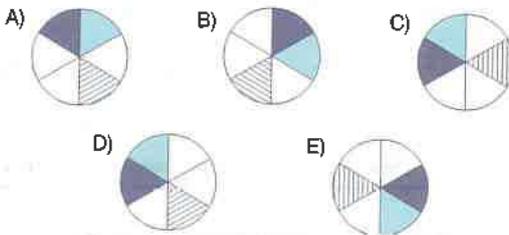
6. Başlangıç konumu yukarıda verilen ve 6 eş parçaya bölünmüş çark ok yönünde 600 döndürülmüştür.

The wheel whose starting position is given above and divided into 6 equal parts is turned 600 in the direction of the arrow.



Buna göre çarkın son görünümü aşağıdakilerden hangisi gibi olur?

Which of the following would the wheel look like?



- 7 - 9 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 7 - 9 according to the information below.

	4		
	8		
14		18	20

2' den 32' ye kadar olan çift sayılar verilen kutucuklara aşağıdaki kurallara göre yerleştirilmiştir.

- Bütün sayılar en az birer kez kullanılacaktır.
- Her satırdaki sayılar toplamı aynı sabit sayıya eşittir.
- Kutulara yerleştirilen sayılar soldan sağa doğru artmaktadır.

Even numbers from 2 to 32 are placed in the boxes given according to the following rules.

- All numbers will be used at least once.
- The sum of numbers in each row is equal to the same constant number.
- The numbers placed in the boxes increase from left to right.

7. Her satırdaki sayıların toplamı kaçtır?

What is the sum of the numbers in each row?

- A) 68 B) 70 C) 72 D) 74 E) 76

8. 12 sayısının bulunduğu sütundaki diğer sayıların toplamı kaçtır?

What is the sum of the other numbers in the column with the number 12?

- A) 22 B) 28 C) 56 D) 64 E) 78

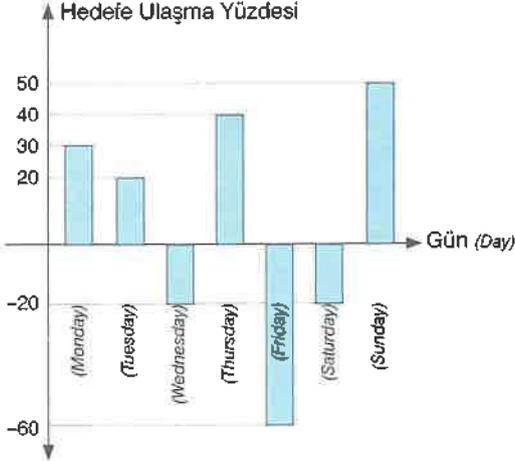
9. 14 sayısının üstünde hangi sayı vardır?

What number is above the number 14?

- A) 2 B) 6 C) 10 D) 12 E) 16

1 - 3 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 2 - 4 according to the information below.



Şekildeki grafik Kemal'in bir hafta içinde günlük belirlendiği soru hedefini yüzde olarak ne kadar geçtiği veya ne kadar altında kaldığını göstermektedir. Bu grafikteki verileri dikkate alarak aşağıdaki kurallara göre puanlama yapılacaktır.

- Çözülen her soru için 1 puan yazılacaktır.
- Günlük hedefi pozitif yönde geçtiği her %10 luk dilim için 20 puan ekstradan kazanacaktır.
- Günlük hedefi negatif yönde geçtiği her %10 luk dilim için 30 puan kaybedecektir.

The graph in the figure shows how much Kemal exceeds or falls short of the daily set goal target in a week, as a percentage. Scoring will be made according to the following rules, taking into account the data in this chart.

- 1 point will be written for each solved question.
- He will earn 20 points for every 10% slice where he passes the daily goal positively.
- He will lose 30 points for every 10% slice where he passes the daily goal negatively!

1. Günlük soru hedefini 100 soru olarak belirlenirse bir haftada kaç puan toplanır?

If the daily question goal is set as 100 questions, how many points are collected in a week?

- A) 630 B) 680 C) 730 D) 780 E) 830

2. Cumartesi günü 90 puanı varsa salı günü kaç puanı vardır?

If he has 90 points on Saturday, how many points does he have on Tuesday?

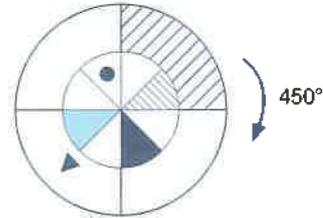
- A) 110 B) 130 C) 150 D) 170 E) 190

3. 505 puan toplanılan bir hafta için günlük hedef kaç sorudur?

What is the daily goal for a week with 505 points?

- A) 55 B) 65 C) 75 D) 85 E) 95

4.



İki tane çark merkezleri bir noktada birleştirilmiştir. Büyük çark dört eş parçaya küçük çark 8 eş parçaya bölünmüştür.

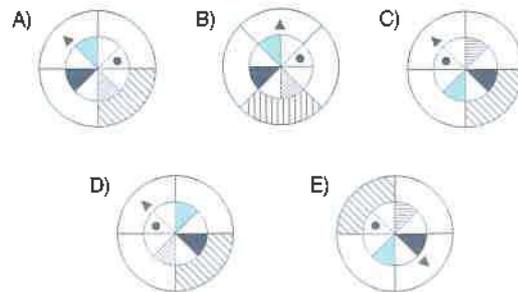
- Küçük çark bir turu 2 dakikada bitirebiliyor.
- Büyük çark bir turu 3 dakikada bitirebiliyor.
- İki çark aynı yönde hareket etmektedir.

Buna göre, büyük çark ok yönünde 450° hareket ederse iki çarkın son görünümünü nasıl olur?

Two-wheel centers are combined at one point. The big wheel is divided into 4 equal parts and the small wheel into 8 equal parts.

- The little wheel can finish a tour in 2 minutes.
- The big wheel can finish a tour in 3 minutes.
- The two wheels are moving in the same direction.

What is the final view of the two wheels if the big wheel moves 450° in the direction of the arrow?



5 - 7 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 5 - 7 according to the information below.

İlker online oynanabilen bir oyun tasarlamaktadır. Oyunun bölümlerinde kazanılan puanları bölüm sonlarında sayı ile ifade etmek yerine kendi geliştirdiği sembollerle ifade etmek istemektedir.

- Bunun için "●", "▲" ve "★" sembollerini kullanacaktır.
- "●" 0 sayısına karşılık gelecek. "▲" 1 değerinde olacak. "★" 6 ya karşılık gelecektir.
- En büyük rakamda 4 tane "▲" ve 5 tane "★" olacaktır. Bu sisteme göre 0' dan 29'a kadar olan sayıları şu şekilde gösterebiliriz.

Ilker is designing a game that can be played online. He wants to express the points earned in the parts of the game with the symbols he has developed instead of using numbers at the end of the game.

- He will use the symbols "●", "▲" and "★" for this.
- "●", will correspond to the number 0. "▲" will correspond to 1. "★" will correspond to 6.
- The largest number will be 4 "▲" and 5 "★". According to this system, we can show the numbers from 0 to 29 as follows.

●	★	★★	★★★	★★★★	★★★★★
0	1	2	3	4	5
▲	★	★★	★★★	★★★★	★★★★★
6	7	8	9	10	11
▲▲	★	★★	★★★	★★★★	★★★★★
12	13	14	15	16	17
▲▲▲	★	★★	★★★	★★★★	★★★★★
18	19	20	21	22	23
▲▲▲▲	★	★★	★★★	★★★★	★★★★★
24	25	26	27	28	29

Örneğin (Example) ; 33025 sayısını yazalım.

Let's write the number 33025.

27.000'ler basamağı :	★	27.000 x 1 = 27.000
900'ler basamağı :	▲	900 x 6 = 5400
30'lar basamağı :	★★	30 x 20 = 600
1'ler basamağı :	★	1 x 25 = 25
	+	
		33025

5.



İlker'in geliştirdiği sembol sistemi ile yazılmış yukarıdaki sayı kaçtır?

What is the above number written with the symbol system developed by Ilker?

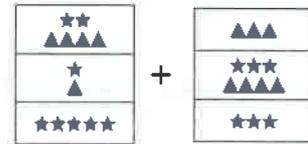
- A) 67776 B) 67720 C) 67730
D) 67736 E) 67746

6. İlker'in geliştirdiği sembol sistemi ile 6 "★", 1 "▲" ve 1 "●" kullanılarak 5400 den küçük en büyük hangi sayı yazılabilir?

What is the biggest number less than 5400 can be written by using 6 "★", 1 "▲" and 1 "●" with the symbol system developed by Ilker?

- A) 5160 B) 4810 C) 4910 D) 5010 E) 5110

7.



Yukarıdaki toplama işleminin sonucu nedir?

What is the result of the addition above?

- A)
- B)
- C)
- D)
- E)

1 - 3 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 1 - 3 according to the information below.

1 2 3 4 5 6 7 8 9 10

--	--	--	--	--	--	--	--	--	--

10 kutu şekildeki gibi soldan sağa doğru 1'den 10'a kadar numaralandırılmıştır.

Bu tablonun 5 kutusu yeşil renge boyanmıştır.

- 1 ve 10 numaralı kutu sağ veya solu beyaz renkte ise 5 değerini alır.
- 1 ve 10 numaralı kutu sağ veya solu yeşil renkte ise 2 değerini alır.
- Diğer kutular sağında ve solunda yeşil renk için bulunduğu sütunun değeri ve beyaz renk için bulunduğu sütunun değerinin 1 eksiğinin toplamını alır.

The 10 boxes are numbered from 1 to 10 from left to right as in the figure.

The 5 boxes of this painting are painted green.

- If the boxes numbered 1 and 10 are in white on the right and left, it takes the value 5.
- If the boxes numbered 1 and 10 are green on the right and left, it takes the value 2.
- Since the other boxes are on the right and left for the green color, it takes the sum of the value of the column and the value of the column for the white color minus 1.

Örnek (Example)

1 2 3 4 5 6 7 8 9 10

2	3	5	7	9	10	14	14	18	5
---	---	---	---	---	----	----	----	----	---

1. Aşağıdaki tabloda, beş kutu yeşile boyanıp kurala uygun sayılar yazıldıktan sonra tablodaki boyanan kutular boyanmamış gibi gösterilmiştir.

In the table below, the painted boxes in the table are shown as if they were not painted after five boxes were painted green and the numbers were written according to the rules.

1 2 3 4 5 6 7 8 9 10

2	2	6	6	10	10	14	14	18	5
---	---	---	---	----	----	----	----	----	---

Buna göre yeşile boyanmış kutuların sütun numaraları toplamı kaçtır?

What is the sum of the column numbers of the boxes painted in green?

- A) 21 B) 23 C) 25 D) 27 E) 30

2. Aşağıdaki tabloda, beş kutu yeşile boyanıp kurala uygun sayılar yazıldıktan sonra tablodaki boyanan kutular boyanmamış gibi gösterilmiştir.

In the table below, the painted boxes in the table are shown as if they were not painted after five boxes were painted green and the numbers were written according to the rules.

1 2 3 4 5 6 7 8 9 10

5	2	4	6	9	11	14	16	18	2
---	---	---	---	---	----	----	----	----	---

Buna göre, yeşile boyanmış kutuların sütun numaraları toplamı kaçtır?

What is the sum of the column numbers of the boxes painted in green?

- A) 36 B) 37 C) 38 D) 39 E) 40

3. Verilen kurallara uygun şekilde kutular boyandıktan sonra kutulara sayılar yazılıyor. Sadece 3 kutuda "2" yazıldığına göre bu kutuların bulunduğu sütunlar toplamı kaçtır?

After the boxes are painted in accordance with the given rules, numbers are written on the boxes. Since "2" is written in only 3 boxes, what is the sum of the columns containing these boxes?

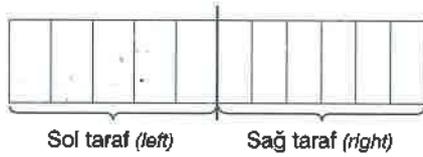
- A) 12 B) 13 C) 14 D) 15 E) 16

4 - 6 sorular aşağıdaki bilgilere göre, birbirinden bağımsız olarak cevaplayınız.

Answer questions 4 - 6 independently according to the information below.

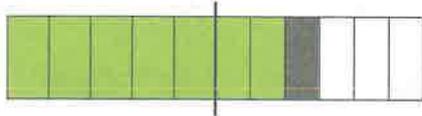
Bir havuzun doluluk durumunu soldan sağa doğru yarısına kadar sol tarafta 5 eşit parçaya, diğer yarısı sağ tarafta 6 eşit parçaya ayrılmış olarak aşağıda verilmiştir.

The situation of a pool is given below, from left to right, half divided into 5 equal parts on the left side, and the other half into 6 equal parts on the right.



- Bölümlerde tamamen dolu olanlar yeşil renk,
 - Bölümlerde yarısı dolu olanlar mavi renk,
 - Tamamen dolu olmayıp veya tamamen boş olmayan bölümlerde siyah renk,
 - Boş bölümlerde beyaz renk ile gösterilecektir.
- Those that are completely filled in the sections are green,
 - Those half full in the sections are blue,
 - Black color in compartments that are not completely filled or not completely empty,
 - It will be displayed in white color in empty sections.

4.

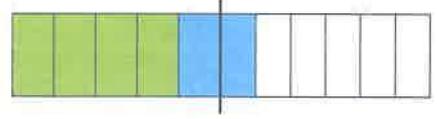


Havuzun doluluk durumu şekildedeki gibi olduğuna göre, havuzun baş olan kısmının hacminin tamamına oranı hangisi olabilir?

Since the occupancy of the pool is as shown in the figure, what would be the ratio of the head part of the pool to its volume?

- A) $\frac{6}{24}$ B) $\frac{7}{24}$ C) $\frac{8}{24}$ D) $\frac{9}{24}$ E) $\frac{10}{24}$

5.

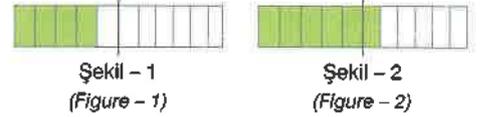


590 litre su havuza doldurduğunda havuzun doluluk durumu şekildedeki gibi olduğuna göre havuz kaç litredir?

When the pool is filled with 590 liters of water, how many liters is the pool since the occupancy of the pool is as shown in the figure?

- A) 900 B) 1000 C) 1100 D) 1200 E) 1250

6.



Havuzun doluluk durumu Şekil - 1'deki gibi iken 165 litre su ilave edince Şekil - 2'deki gibi oluyor.

Buna göre havuz toplam kaç litre su alır?

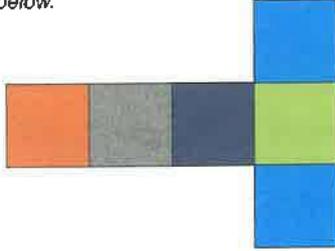
While the occupancy condition of the pool is as in Figure 1, when 165 liters of water is added, it becomes as in Figure 2.

Accordingly, how many liters of water does the pool take?

- A) 900 B) 1000 C) 1100 D) 1200 E) 1250

1. Yüzeyleri birbirinden farklı renklerle boyanmış bir küpün açılımı aşağıda verilmiştir.

The opening of a cube painted with different colors is given below.



Bu küpün yüzeylerine, 2'den 12'ye kadar olan çift sayılar birer kez kullanılarak, 6 yüzeye de yazılmıştır. Şekil sonra küp haline getirilmiştir. Küpte karşılıklı halde olan yüzeyler toplamı 14 olacak biçimde olmuştur.

Bu kurala uygun kaç farklı numaralandırma yapılabilir?

On the surfaces of this cube, even numbers from 2 to 12 are used once and written on 6 surfaces. The shape was then cube. The sum of the opposing surfaces in the cube was 14.

How many different numbering can be made according to this rule?

- A) 12 B) 18 C) 24 D) 36 E) 48

2 – 4 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 2 –4 according to the information below.

Bir kreşte 8'i kız , 20'si erkek olmak üzere 28 öğrenci kayıtlıdır.

- Öğrencilere ya İpek hemşire ya da Fatma hemşireden yalnız biri tarafından aşı yapılmaktadır.
- İpek hemşire tarafından aşı yapılan erkek öğrencilerin sayısı, fatma hemşire tarafından aşı yapılan kız öğrencilerin sayısına eşittir.
- Bu kreşte kız öğrencilere 2'şer aşı, erkeklere ise 1'er aşı yapılmaktadır.

28 students, 8 girls and 20 boys, are enrolled in a kindergarten.

- Students are vaccinated by either İpek nurse or Fatma nurse.
- The number of male students vaccinated by İpek nurse is equal to the number of female students vaccinated by Fatma.
- In this kindergarten, 2 vaccinations are given to female students and 1 to each male.

2. İpek Hemşire'nin yaptığı aşıların toplamı 14' tür.

Buna göre erkek öğrencilere yapılan aşıları kaçını Fatma hanım yapmıştır?

The total of the vaccinations made by İpek Nurse is 14.

Accordingly, how many of the vaccinations given to male students have been made by Fatma?

- A) 16 B) 17 C) 18 D) 19 E) 20

3. Bu kreşe kayıtlı öğrencilerden Fatma Hemşire'nin aşı yaptığı erkek öğrencilerin sayısı, İpek Hemşire'nin aşı yaptığı kız öğrencilerin sayısının 4 katıdır.

Buna göre Fatma Hemşire'nin yaptığı toplam aşı sayısı kaçtır?

The number of male students who were vaccinated by Fatma Nurse is 4 times the number of female students who were vaccinated by İpek Nurse.

Accordingly, what is the total number of vaccines Fatma Nurse made?

- A) 22 B) 24 C) 26 D) 28 E) 30

4. Fatma Hemşire, İpek Hemşire'den 14 tane daha fazla aşı yapmıştır.

Buna göre İpek Hemşire'nin aşı yaptığı kız öğrenci sayısı kaçtır?

Fatma Nurse has made 14 more vaccines than İpek Nurse.

According to this, what is the number of female students whom İpek Nurse vaccinated?

- A) 3 B) 4 C) 5 D) 6 E) 7

5 – 7 soruları aşağıdaki bilgilere göre, birbirinden bağımsız olarak cevaplayınız.

Answer questions 5 - 7 independently according to the information below.

Bir münazarada her bir grupta 1'den 30'a kadar tam sayılarla numaralandırılmış 30 yeşil ve 30 sarı toplam 60'ar bayrak bulunacak ve aşağıdaki kurallara göre kazanan belirlenecektir.

- Bir grubun diğer gruba bayrak vermesi hamle olarak adlandırılır.
- Münazara, bir grubun diğer gruba büyük numarası 15'ten küçük olan bayrak vermesi ile başlar.
- Her bir grup diğer gruptan bayrağı alıp savunmasını yaptıktan sonra aldığı bayrak rengi ile aynı ve numarasının 2 katı olan bayrağı ya da farklı renk 3 fazlası olan bayrağı rakibine vererek hamle yapar.
- Herhangi bir grup elindeki bayraklarla hamle yapamayınca münazara biter ve oyunu kaybeder.

In a debate, each group will have 30 green and 30 yellow flags with integers from 1 to 30 and a total of 60 flags will be determined according to the following rules.

- A group's flag to another group is called a move.
- The debate starts with one group giving the other group a flag with the bigger number less than 15.
- After each group takes the flag from the other group and defends itself, it moves by giving the flag with the same color and 2 times the number of the flag is received, or the flag with 3 more than the different color to its opponent.
- When any group fails to make a move with their flags, the debate ends and loses the game.

5. Münazaraya başlayan grup birinci hamlede 6 numaralı yeşil bayrağı diğer gruba veriyor.

Buna göre münazarada üçüncü hamlesinde diğer gruba verilen bayrak hangisi olamaz?

The group that started the debate gives the green flag number 6 to the other group in the first move.

Accordingly, which flag cannot be given to the other group in the third move in the debate?

- A) 12 numaralı yeşil bayrak (Green flag number 12)
B) 15 numaralı sarı bayrak (Yellow flag number 15)
C) 18 numaralı sarı bayrak (Yellow flag number 18)
D) 24 numaralı yeşil bayrak (Green flag number 24)
E) 24 numaralı sarı bayrak (Yellow flag number 24)

6. Münazaranın üçüncü hamlesinden 23 numaralı yeşil bayrak diğer gruba veriliyor.

Buna göre münazaranın ilk hamlesinde verilen bayrak hangisi olabilir?

The green flag numbered 23 is given to the other group from the third move of the debate.

Accordingly, which flag could be given in the first move of the debate?

- A) 10 numaralı yeşil bayrak (Green flag number 10)
B) 10 numaralı sarı bayrak (Yellow flag number 10)
C) 11 numaralı sarı bayrak (Yellow flag number 11)
D) 11 numaralı yeşil bayrak (Green flag number 11)
E) 8 numaralı sarı bayrak (Yellow flag number 8)

7. Münazaraya başlayan grup birinci hamlede 12 numaralı sarı bayrağı diğer gruba veriyor.

Buna göre, münazara en az kaç hamlede biter?

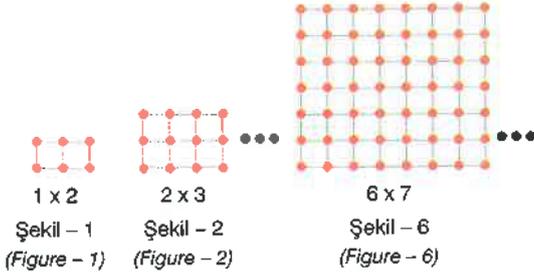
The group, which started the debate, gives the yellow flag number 12 to the other group in the first move.

Accordingly, at least how many moves will the debate end?

- A) 3 B) 4 C) 5 D) 6 E) 7

1 - 4 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 1 - 4 according to the information below.



- Verilen şekiller kibrit çöpü ile oluşturulmuştur.
- Yukarıdaki şekillerde sağa doru her ilerlendiğinde satır ve sütun birer artmaktadır.
- Şekil - 1 de 7 kibrit çöpü, Şekil - 2 de 17 kibrit çöpü kullanılmıştır.
- Her bir kibrit çöpü, 1 cm uzunluğundadır.
- The figures given are created with matchsticks.
- In the figures above, row and column increase by one each time one moves to the right.
- 7 matchsticks are used in Figure-1, and 17 matchsticks are used in Figure-2.
- Each matchstick is 1 cm long.

1. Şekil - 6'da kaç tane kare vardır?

How many squares are in figure 6?

- A) 100 B) 108 C) 112 D) 114 E) 116

2. 8 x 9 karelik şekilde çevresi 16 cm olan kaç tane kare vardır?

In the 8 x 9 squares figure, how many squares are there with a circumference of 16cm?

- A) 25 B) 30 C) 35 D) 40 E) 45

3. Şekil - 6'da  şeklinden kaç tane vardır?

How many of the 2 x 3 shapes are in Figure 6?

- A) 15 B) 18 C) 21 D) 25 E) 27

4. Verilen tabloya göre, Şekil -17 (17x18)'deki toplam kibrit çöpü sayısı kaçtır?

According to the given table, what is the total number of matchsticks in figure -17 (17x18)?

- A) 557 B) 597 C) 607 D) 627 E) 647

5 - 7 soruları aşağıdaki bilgilere göre, birbirinden bağımsız olarak cevaplayınız.

Answer questions 5 - 7 independently, according to the information below.

Bir bilgisayar algoritması girilen x , y ve z tam sayıları için aşağıdaki adımları sırasıyla uyguluyor.

1. Adım: $A = x(y - z)$ olarak hesapla ve 2. adıma git.
2. Adım: A değeri çift ise 3. adıma git, tek ise 4. adıma git.
3. Adım: x değerini 1 arttır, 1. adıma git.
4. Adım: A değerini ekrana yaz.

A computer algorithm applies the following steps for the integers x , y and z entered in the order.

- Step 1: $A = x(y - z)$ and go to step 2.
 Step 2: If the value of A is even, go to step 3, if odd, go to step 4.
 Step 3: increase x by 1, go to step 1.
 Step 4: Write the value of A on the screen.

5. Bu algoritmaya girilen x , y ve z sayıları sırasıyla 4, 5, 2 ise ekrana yazılan sayı kaçtır?

If the x , y and z numbers entered into this algorithm are 4, 5, and 2 respectively, what is the number written on the screen?

- A) 10 B) 11 C) 12 D) 13 E) 14

6. Bu algoritmaya girilen x , y ve z tam sayıları için ekrana $A = 15$ değeri yazılmıştır.

Buna göre, girilen x tam sayısı kaç değer alır?

$A = 15$ value is written on the screen for the integers x , y and z entered in this algorithm.

How many values does the entered integer x take?

- A) 10 B) 11 C) 12 D) 13 E) 14

7. Bu algoritmaya, girilen x , y ve z tam sayıları için 4. adıma hiç bir zaman geçememiştir.

Buna göre ;

- I. x tek.
- II. $y - z$ çift.
- III. $y \cdot z$ tek.

İfadelerinden hangileri doğru olabilir?

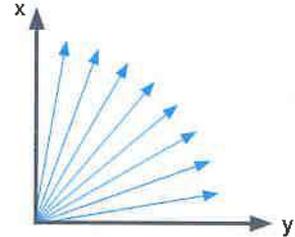
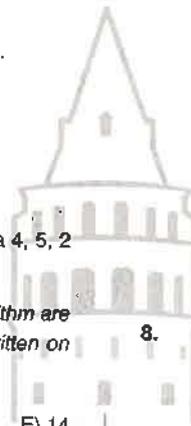
This algorithm never passed to step 4 for the integers x , y and z entered.

According to this;

- I. x is odd.
- II. $y - x$ is even.
- III. $y \cdot z$ is odd.

Which of the statements are always correct?

- A) I B) II C) I - II D) I - III E) II - III



Yukarıdaki şekilde ölçüsü dar açı olan en fazla kaç tane açı vardır?

How many angles at the most are acute angles in the above figure?

- A) 42 B) 43 C) 44 D) 45 E) 46

1 – 3 soruları aşağıdaki bilgilere göre, birbirinden bağımsız olarak cevaplayınız.

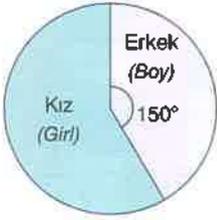
Answer questions 1 - 3 independently according to the information below.

Yaşları 2, 3 ve 4 olan öğrencilerden oluşan bir kreş ile ilgili aşağıdaki bilgiler verilmiştir.

- Bu kreşte bulunan toplam öğrenci sayısının kız-erkek dağılımı 1. dairesel grafikte verilmiştir.
- Bu kreşte bulunan öğrencilerin yaşlarına göre dağılımını 2. dairesel grafikte verilmiştir.

The following information is given about a kindergarten consisting of students aged 2, 3, and 4.

- The distribution of the total number of students in this kindergarten is given in the 1st circular graph.
- The distribution of the students in this kindergarten according to their ages is given in the second circular graph.



1. grafik
(Graphic 1)



2. grafik
(Graphic 2)

1. Bu kreşteki öğrencilerin toplam sayısı 120' dir.

Buna göre, bu kreşteki 3 yaşında olan öğrencilerin toplam sayısı kaçtır?

The total number of students in this kindergarten is 120.

Accordingly, what is the total number of 3-year-old students in this kindergarten?

- A) 24 B) 30 C) 36 D) 40 E) 48

2. Bu kreşte bulunan 4 yaşındaki öğrencilerin toplam sayısı 90'dır. Kreşteki 2, 3 ve 4 yaşındaki erkeklerin sayısı birbirlerine eşittir.

Buna göre, 4 yaşındaki kızların toplam sayısı kaçtır?

The total number of 4-year-old students in this kindergarten is 90. The number of boys aged 2, 3, and 4 in the nursery is equal to each other.

So what is the total number of girls aged 4?

- A) 50 B) 60 C) 70 D) 80 E) 90

3. 2 yaşındaki öğrencilerin sayısı 45'tir. Erkek öğrencilerin sayısı ; 3 yaşındaki öğrencilerin sayısı ile 4 yaşındaki kız öğrencilerin sayısının toplamına eşittir.

Buna göre 4 yaşındaki erkek öğrencilerin sayısı kaçtır?

The number of students aged 2 is 45. The number of male students; is equal to the number of students aged 3 and the number of female students aged 4.

Accordingly, what is the number of 4-year-old male students?

- A) 15 B) 30 C) 45 D) 60 E) 75

4 – 5 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 4 – 5 according to the information below.

30 çocuk bir kutu bilyeyi paylaşacaktır. Bu paylaşımında ;

- Erkeklerle 7'şer, kızlara 5'er bilye verince 4 bilye artıyor.
- Erkeklerle 5'er, kızlara 7'şer bilye verilirse 4 bilyeye daha ihtiyaç vardır.

30 children will share a box of balls. In this share;

- When 7 marbles are given to boys and 5 marbles to girls, 4 marbles increase.
- If 5 marbles are given to boys and 7 marbles to girls, 4 more are needed.

4. Bu çocukların kaç tanesi kız çocuktur?

How many of these children are girls?

- A) 13 B) 14 C) 15 D) 16 E) 17

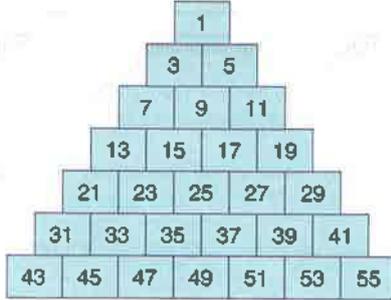
5. Kutuda kaç tane bilye vardır?

How many marbles are in the box?

- A) 90 B) 120 C) 150 D) 180 E) 210

6 – 9 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 6 - 9 according to the information below.



İlk 7 basamağı yukarıda verilen sayı piramidiyle ilgili aşağıdaki özellikler bilinmektedir.

- Piramitteki sayıların tümü tek sayıdır.
- Sayılar 1'den başlayarak sırasıyla soldan sağa ve yukarıdan aşağıya artmaktadır.
- Piramidin m. basamağında m tane sayı vardır.

The following features are known about the number pyramid whose first 7 digits are given above.

- The numbers in the pyramid are all odd numbers.
- Numbers start from 1, increasing from left to right and top to bottom, respectively.
- There are m numbers in the M.th rung of the pyramid.

6. Piramidin ilk 12 basamağında kaç tane sayı vardır?

How many numbers are in the first 12 digits of the pyramid?

- A) 65 B) 69 C) 73 D) 78 E) 81

7. Piramidin 10. basamağındaki sağdan 3. sayı kaçtır?

What is the 3rd number from the right in the 10th step of the pyramid?

- A) 101 B) 103 C) 105 D) 107 E) 109

8. Aşağıdaki sayılardan hangisi 133 ile aynı basamaklıdır?

Which of the numbers below has the same digit as 133?

- A) 125 B) 111 C) 151 D) 161 E) 183

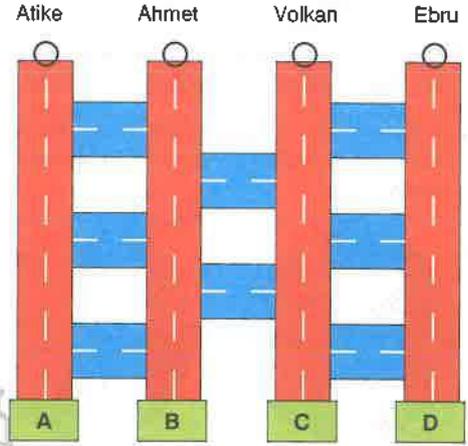
9. 237 sayısı piramidin kaçınıncı basamağındadır?

On what rank is the number 237 in the pyramid?

- A) 14 B) 15 C) 16 D) 17 E) 18

10. Atike, Ahmet, Volkan ve Ebru buldukları noktalardan başlayıp şekildeki kırmızı ve mavi yolları kullanıp A, B, C, D hedeflerine varmaktadır.

Atike, Ahmet, Volkan, and Ebru start from the points where they are located and use the red and blue roads shown in the figure and reach the A, B, C, D targets.



Yollarda hareket etmenin kuralları şu şekildedir.

- Araçlar aşağı, sağa ve sola doğru hareket edebilir.
- Kırmızı yolda hareket eden kişi ilk mavi çıkışa geldiğinde mavi yola geçer.
- Mavi yolda hareket eden kişi ilk kırmızı çıkışa geldiğinde kırmızıdan hedefe doğru gider.

Buna göre Atike, Ahmet, Volkan ve Ebru'nun ulaştıkları hedefler sırasıyla hangi seçenekte verilmiştir.

The rules for moving on the roads are as follows.

- Vehicles can move down, right, and left.
- When a person moving on the red road comes to the first blue exit on the left, he goes on the blue road.
- When a person moving on the blue road comes to the first red exit, he goes from the red to the target.

Accordingly, in which option was the goals achieved by Atike, Ahmet, Volkan, and Ebru, respectively?

- A) A, C, D, B B) B, D, C, A C) C, D, A, B
D) D, A, B, C E) A, B, C, D

1 – 4 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 1 – 4 according to the information below.

4 torba ve 50 bilyeyle bir oyun oynanıyor. Oyuna başlamadan önce bilyeler torbalara istenildiği gibi dağıtılıyor.

Oyun sırasında bu bilyelerin yerleri torbalar arasından şu 2 kurallara göre değiştiriliyor.

- Birer al ekle kuralı (x kuralı): Herhangi 3 torbadan birer bilye alınıp bunlar 4. torbadaki bilyelere eklenir. Böylece 4. torbaya birer al ekle kuralı uygulanır.
- Üç al dağıt (y kuralı): Herhangi bir torbadan 3 bilye alınıp öteki torbaya birer tane dağıtılır. Böylece bilyelerin alındığı torbaya üç al dağıt kuralı uygulanmış olur.

A game is played with 4 bags and 50 balls. Before starting the game, the balls are distributed in bags as desired.

During the game, the places of these balls are changed among the bags according to the following 2 rules.

- Add one-take rule (x rule): Take one marble from any 3 bags and add them to the balls in the 4th bag. Thus, the rule of add one take to the 4th bag is applied.
- Distribute three items (y rule): Take 3 marbles from any bag and distribute one to the other bag. In this way, the three take and distribute rule will be applied to the bag from which the balls are taken.

1. Bilyeler torbalara aşağıdaki gibi I. torbada 11, IV. torbada 17 bilye olacak şekilde dağıtılıyor.

The balls are distributed in the bags as 11 in the 1st bag and 17 in the 4th bag as follows.



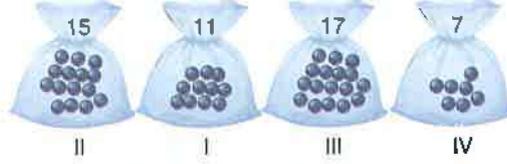
I. torbaya y kuralı uygulandığında II. ve III. torbadaki bilye sayılarının toplamı kaç olur?

When the rule of Y is applied to bag 1, what is the sum of the number of marbles in bag 2 and 3?

- A) 24 B) 25 C) 26 D) 27 E) 28

2. Bilyeler torbalara aşağıdaki gibi dağıtılıyor.

The balls are distributed in bags as follows.



Önce 1. torbaya y kuralı ondan sonra III. torbaya x kuralı uygulandığından son durumda torbalardaki bilye sayıları aşağıdakilerden hangisi gibi olur?

When Y rule is applied to the first bag, and then the X rule to the third bag,

In the last case, which of the following would be the number of balls in the bags?

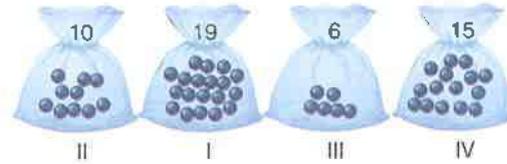


3. Aşağıdakilerden hangisinde verilen 2 kural art arda uygulandığında III. torbadaki bilye sayısı değişmez?

In which of the following two rules are applied consecutively, the number of marbles in the 3rd bag does not change?

- A) II. x, IV. y kuralı (rules)
B) I. x, II. y kuralı (rules)
C) IV. x, I. x kuralı (rules)
D) II. y, I. y kuralı (rules)
E) IV. y, II. y kuralı (rules)

- 4.



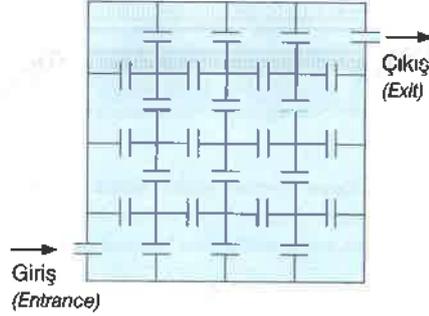
III. torbada 17 bilyeye ulaşmak isteniyor bunun için kurallar en az kaç kere uygulanır?

In the 3rd bag, 17 marbles are wanted to be reached, how many times are the rules applied for this?

- A) 3 B) 4 C) 5 D) 6 E) 7

5 – 7 soruları aşağıdaki bilgilere göre cevaplayınız.

Answer questions 5 - 7 according to the information below.



Yukarıda 16 odadan oluşan bir oyun kağıdı verilmiştir.

Bu oyunun kuralları aşağıdaki gibidir.

- I. Kural: Oyuncu giriş kapısından girip çıkış kapısından odaları dolaşarak çıkmalıdır.
- II. Kural: Oyuncu geçtiği her odada kaç puan varsa o puanı almaktadır fakat kullandığı her kapı için oyuncudan 4 puan düşülmektedir. (giriş- çıkış dahil)
- III. Kural: Her odadan en çok bir kez geçmelidir.

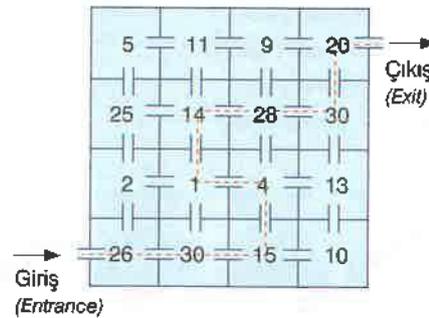
A playing card consisting of 16 rooms is given above. The rules of this game are as follows.

Rule I: The player must enter the entrance door and exit the exit door by walking around the rooms.

Rule II: The player gets how many points in each room he passes, but 4 points are deducted from the player for each door he uses. (including entrance and exit)

Rule III: It must pass through each room at most once.

5.

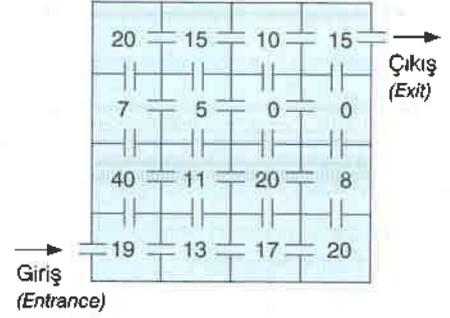


Bir oyuncu verilen oyun kağıdında kesikli çizgilerle belirtilen yolu takip ederse kaç puan toplar?

How many points does a player get if he follows the path indicated by dashed lines on the given playing card?

- A) 168 B) 154 C) 140 D) 128 E) 126

6.

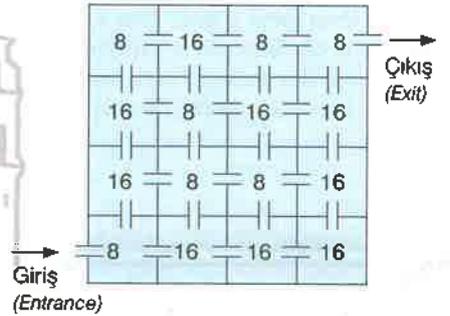


Bir oyuncu yukarıda verilen oyun kağıdında 20 puan bulunan odaların üçünden de geçerek en az kaç puan toplar?

How many points does a player get by going through all three of the rooms with 20 points on the playing card given above?

- A) 107 B) 113 C) 117 D) 121 E) 125

7.



Bir oyuncu yukarıda verilen oyun kağıdında 7 odadan geçerek en fazla kaç puan toplayabilir?

How many points can a player collect by going through 7 rooms on the playing card given above?

- A) 52 B) 64 C) 84 D) 96 E) 108

1.

+	a	b	c
2a		15	
2b			3
2c	9		

$\Rightarrow a \cdot b \cdot c = ?$

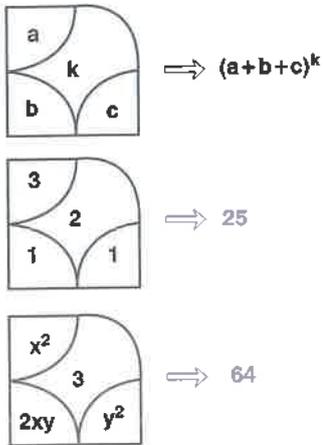
- A) 7 B) 9 C) 10 D) 12 E) 15

2.

4	3	2	4
7	?	8	3
2	8	5	9
3	2	5	4

- A) 4 B) 5 C) 6 D) 7 E) 8

3.

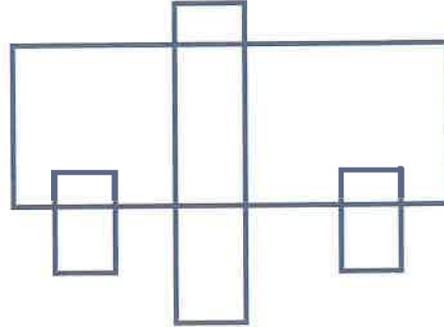


$\Rightarrow x + y = ?$

- A) 1 B) 2 C) 3 D) 4 E) 6

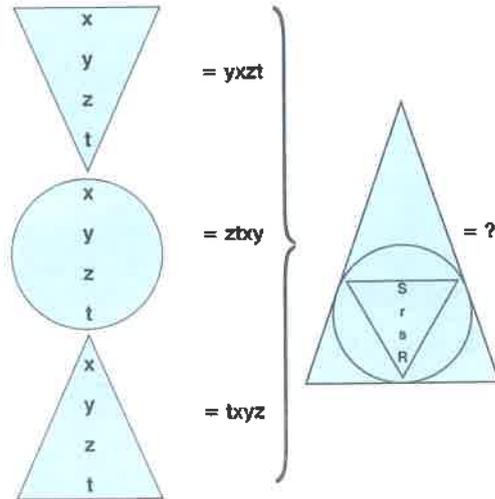
4. Aşağıdaki şekilde kaç dörtgen vardır?

How many quadrilaterals are there in the figure below?



- A) 14 B) 15 C) 16 D) 17 E) 18

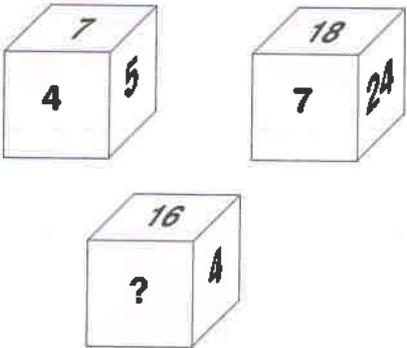
5.



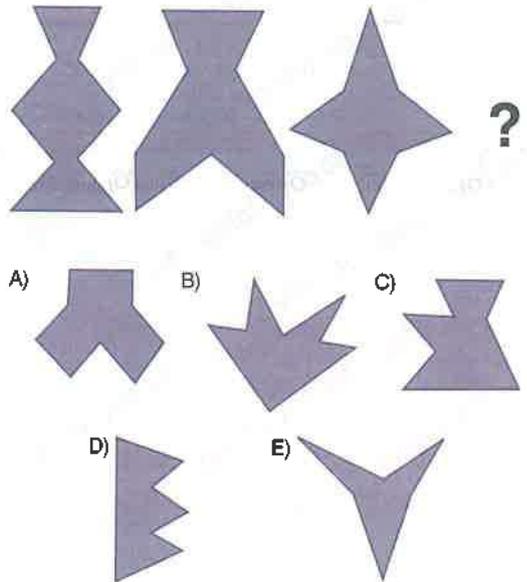
- A) RSrs B) rSsR C) sRrS

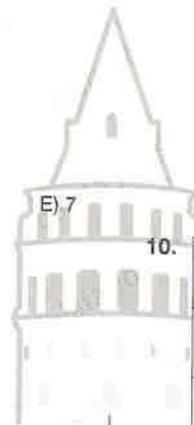
- D) SrRs E) SsRr

6. $9 \oplus 54 = 36$
 $21 \oplus 45 = 75$
 $24 \oplus 63 = 87$
 $15 \oplus 27 = ?$
 A) 48 B) 53 C) 57 D) 65 E) 69

7. 
 A) 3 B) 4 C) 5 D) 6 E) 7

8. 21, 4, 14, 6, 7, ... ?
 A) 15 B) 33 C) 37
 D) 49 E) 62

9. 



10.

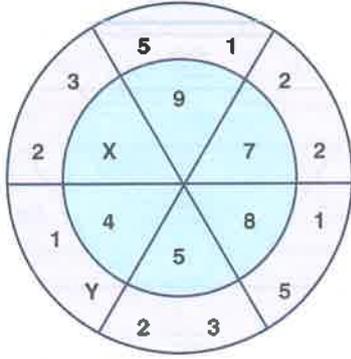
8				12			
16	4			9	16		
27	5	3		7	11	21	

G		
L	T	
1	3	13

$\Rightarrow G + L + T = ?$

- A) 11 B) 14 C) 20
 D) 22 E) 32

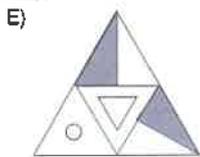
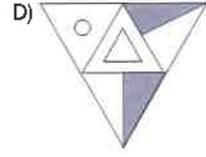
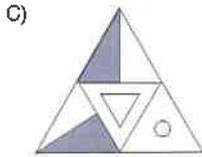
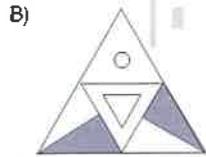
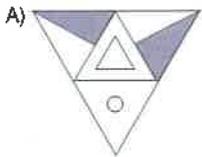
11.



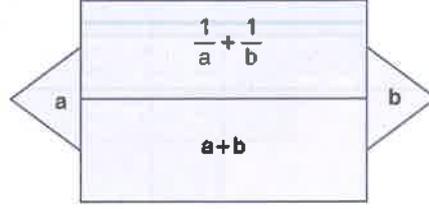
$$\Rightarrow x \cdot y = ?$$

- A) 7 B) 11 C) 13 D) 17 E) 19

12. Aşağıdakilerden hangisi diğerlerinden farklıdır?

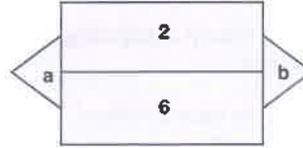
Which one of the following is different?

13.



Yukarıda belirlenen kurala göre aşağıdaki şekil verilmiştir.

The figure below is given based on the rule defined above.



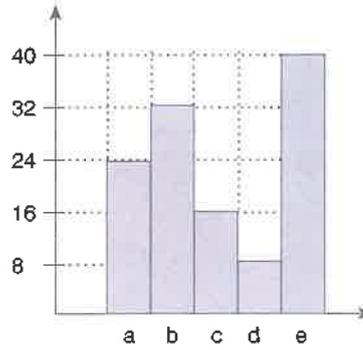
Buna göre, aşağıdaki önermelerden hangileri doğrudur?

Accordingly, which of the following claims is/are true?

- I. $a \cdot b = 3$
 II. $a^2 + b^2 = 15$
 III. $\frac{a}{2b} + \frac{b}{2a} = 10$

- A) I B) I, II C) III
 D) II, III E) I, III

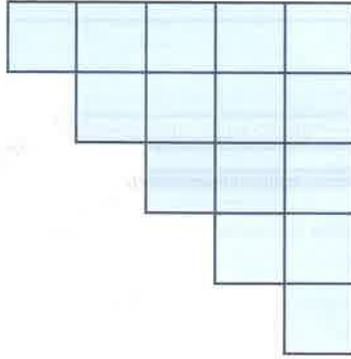
14.



$$a - b + c - d + e = ?$$

- A) a B) b C) c
 D) d E) e

15.



Şeklin alanı 135cm^2 olduğuna göre bu şeklin çevresi kaç cm dir?

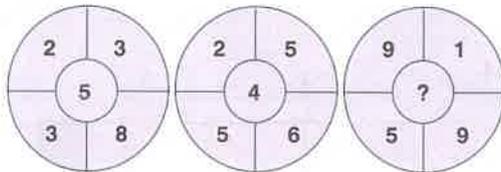
If the area of the figure is 135cm^2 , what the perimeter of this figure, in cm?

- A) 60 B) 80 C) 90
D) 100 E) 120

16. $113546 - 134154 - 175370 - ?$

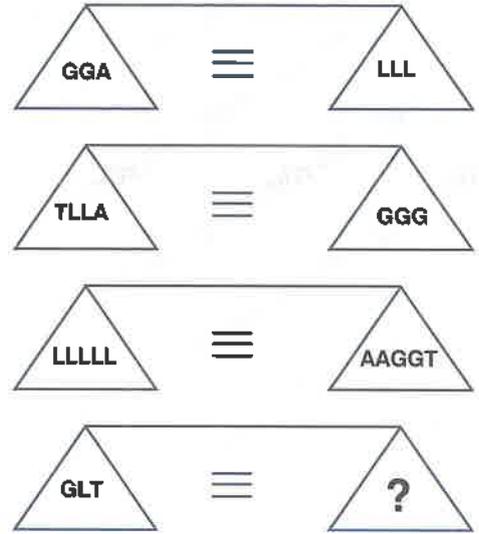
- A) 186280 B) 195978 C) 196382
D) 216081 E) 237093

17.



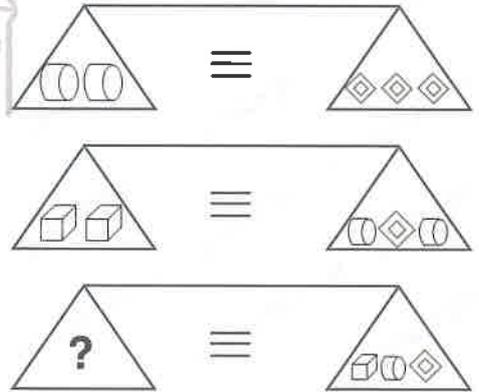
- A) 2 B) 5 C) 6
D) 7 E) 8

18.



- A) AAAAAA B) AAAAAAAA
C) AAAAAAAAAA D) AAAAAA
E) AAAAAA AAAAAA

19.



- A) (2 circles) B) (3 diamonds)
C) (2 diamonds) D) (4 circles)
E) (3 cubes)

20.

MPNO BACD
 NLKK DBEA
 PMPL CCFB
 OKMN FEAE
 \Rightarrow KLMN = ?

- A) BEDC B) CFAB C) FABC
 D) CDEB E) BAFC

21.

4	B		
	3		2
2			C
A			1

4 x 4 Tabloda 1'den 4'e kadar olan rakamlar her satırda ve her sütunda birer kez kullanılmıştır.

Buna göre, $A - B + C$ ifadesinin değeri kaçtır?

In the 4x4 matrix above, numbers from 1 to 4 are used only once in each row and column.

Accordingly, and is the value of $A - B + C = ?$

- A) 4 B) 5 C) 6
 D) 7 E) 8

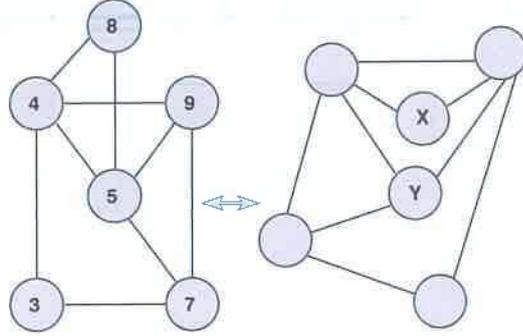
22.

$$\begin{array}{r} \text{AAB} \\ \text{BBC} \\ + \text{CCA} \\ \hline 1554 \end{array}$$

$$\begin{array}{r} \text{ABC} \\ - \quad \quad \quad \text{D} \\ \hline \quad \quad \quad \text{9} \end{array}$$
 $\Rightarrow D = ?$

- A) 4 B) 5 C) 6
 D) 7 E) 8

23.



$(x, y) = ?$

- A) 3, 7 B) 8, 9 C) 3, 9
 D) 7, 5 E) 8, 7

24. Bugün 1 Ekim perşembe ve saat 11.15 olduğuna göre, 100 saat sonraki tarih, gün ve saat hangisidir?

If today is 1 October, Thursday and 11.15 o'clock, what will be the date, the day and the time after 100 hours?

- A) 4 Ekim Pazar 16.15
 4 October Sunday
 B) 5 Ekim Pazartesi 15.15
 5 October Monday
 C) 4 Ekim Salı 14.15
 4 October Tuesday
 D) 5 Ekim Çarşamba 16.45
 5 October Wednesday
 E) 4 Ekim Perşembe 15.15
 4 October Thursday

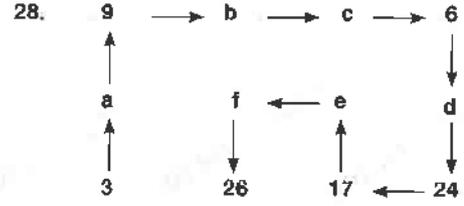
25.

KN = P
 LK = O
 MP = L
 MKN = ?

- A) P B) O C) L
 D) K E) M

26. I.
- II.
- III.
- IV. ?
- A) B)
- C) D)
- E)

- 27.
- A)
- B)
- C)
- D)
- E)



$$a - b + c - d + e - f = ?$$

- A) -3 B) 0 C) 3 D) 6 E) 9

29.

A	G	♥	L	☆	T
G	L	☆	T	G	♥
♥	☆	T	G	♥	L
L	T	G	♥	L	☆
☆	G	♥	L	☆	T
T	♥	L	☆	T	G

$$GA((LA(TA☆))AX) = ♥ \Rightarrow X = ?$$

- A) G B) ♥ C) L D) ☆ E) T

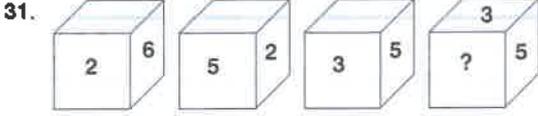
30. Bir kutuda kırmızı ve mavi olmak üzere toplam 24 bilye vardır. Bu kutudan 3 mavi bilye çıkartıldığında kırmızı bilye çekilme olasılığı $\frac{1}{3}$ oluyor.

Buna göre, başlangıçta aynı kutuda kaç tane mavi bilye vardır?

There is a total of 24 marbles of red and blue colors in a box, the possibility of drawing a red marble becomes $\frac{1}{3}$.

Accordingly, what was the number of blue marbles at the beginning?

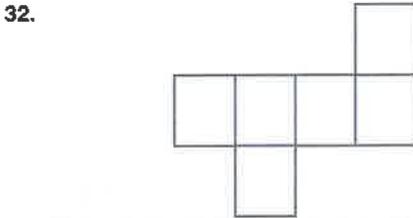
- A) 11 B) 12 C) 14
D) 15 E) 17



Yukarıda yüzeylerinde 1'den 6'ya kadar sayıların bulunduğu bir küp verildiğine göre, "?" işareti yerine hangi sayı gelebilir?

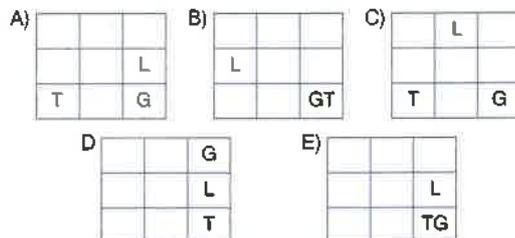
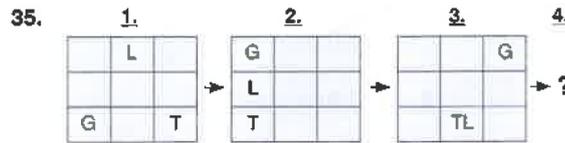
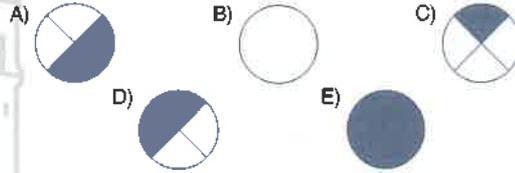
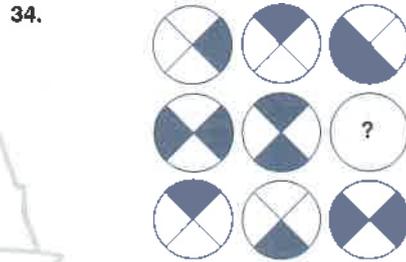
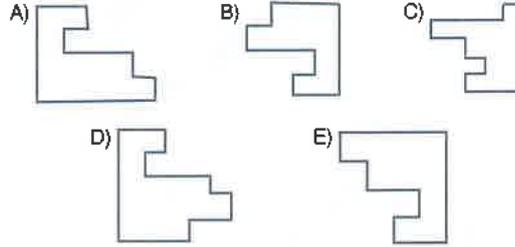
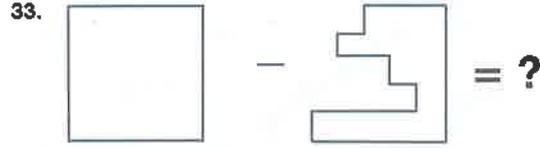
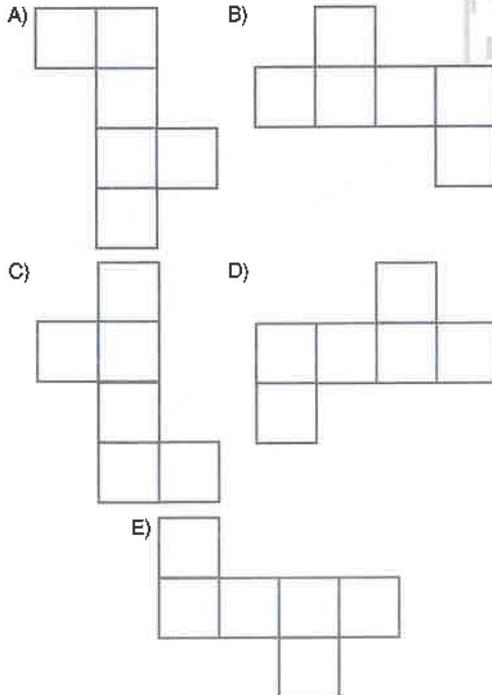
If it is given a cube above which has numbers from 1 to 6 on its surfaces, what number can replace the "?" mark?

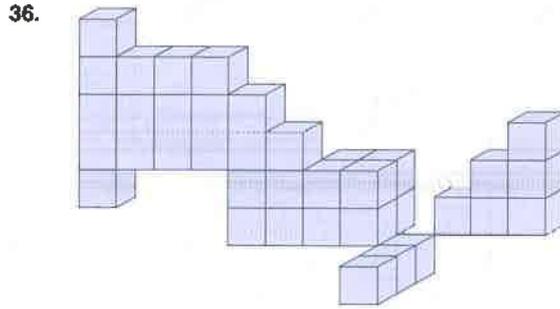
- A) 2 B) 3 C) 4 D) 5 E) 6



Yukarıdaki şekil saat yönünde 90° derece döndürülürse, aşağıdakilerden hangisi elde edilir?

If the figure above is rotated 90° in the clockwise direction, which of the following figures will be obtained?





Yukarıdaki şekilde kaç küp vardır?

How many cubes are there in the figure given above?

- A) 34 B) 36 C) 38
D) 40 E) 42

37. Bir tren saatte 150km hızla 1600m uzunluktaki tünelle giriyor. Trenin son vagonu tünelle girmeye başladıktan 45 saniye sonra tünelden çıkıyor.

Buna göre trenin boyu kaç metre uzunluktadır?

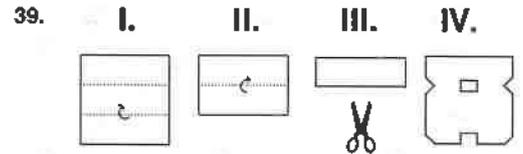
A train with a speed of 150km per hour enters a tunnel whose length is 1600m. Its last wagon leaves the tunnel 45 seconds after the train starts entering the tunnel.

Accordingly, what is the length of the train, in meters?

- A) 225 B) 250 C) 275
D) 325 E) 375

38. I. → 8
II. → 1
III. → ?

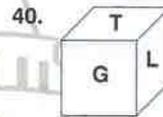
- A) 1 B) 2 C) 4
D) 9 E) 16



Şekil IV.'ü elde etmek için; Şekil III.'ü nasıl kesmek gerekir?

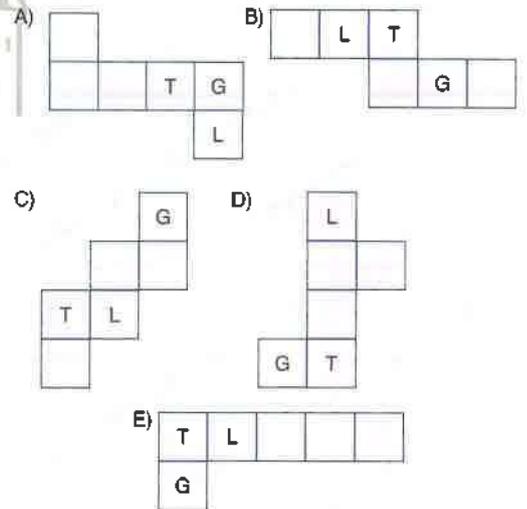
How to cut Figure IV. in order to get Figure III.?

- A) B) C)
D) E)



Yanda verilen küpün açılmış hali aşağıdakilerden hangisidir?

Which one of the following is the unfolded form of the cube?

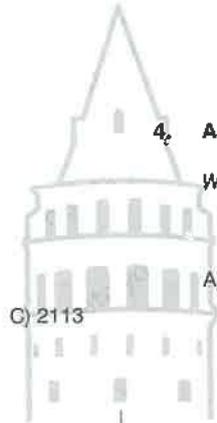


1. Bir mağazada gömlek fiyatı 80TL, pantolon fiyatı 120TL'dir. Kaan'ın 6 farklı gömlek, 4 farklı pantolon arasından 5 parça elbise aldığında 480TL ödemiş olma olasılığı kaçtır?

In a store, the price of shirts is 80 TL and trousers are 120 TL. What is the probability that Kaan paid 480 TL when he bought 6 shirts and 5 pieces of clothes among 4 trousers?

- A) $\frac{1}{3}$ B) $\frac{10}{21}$ C) $\frac{3}{7}$
D) $\frac{25}{42}$ E) $\frac{2}{3}$

2. PATATES → 12211
TARHANA → 13111
MERCİMEK → 221111
BEZELYE → ?
A) 12121 B) 1312
D) 21112 E) 13111



3.

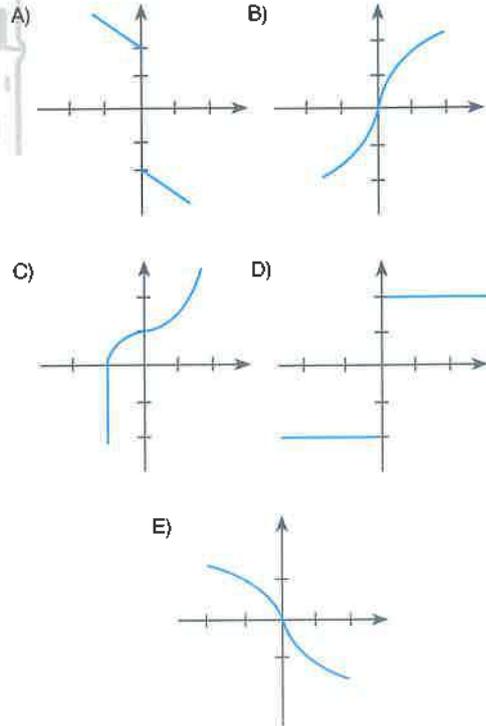
x	2	B	13
x+a		9	15
x+2a	10		
x+3a	A		
x+4a		24	C

$$C + B - A = ?$$

- A) 7 B) 11 C) 15
D) 19 E) 23

4. Aşağıdakilerden hangisi diğerlerinden farklıdır?

Which one of the following figures is different?



5.

$$\begin{array}{|c|c|} \hline 14 & 9 \\ \hline \end{array} \oplus \begin{array}{|c|c|} \hline 6 & 8 \\ \hline \end{array} = 70$$

$$\begin{array}{|c|c|} \hline 5 & 3 \\ \hline \end{array} \oplus \begin{array}{|c|c|} \hline 9 & 2 \\ \hline \end{array} = 56$$

$$\begin{array}{|c|c|} \hline 7 & 5 \\ \hline \end{array} \oplus \begin{array}{|c|c|} \hline 4 & 4 \\ \hline \end{array} = ?$$

- A) 77 B) 84 C) 91
D) 96 E) 106

6.

$$\begin{array}{r|l} A & B \\ \hline & 5 \\ \hline 3 & \end{array} \quad \begin{array}{r|l} B & C \\ \hline & 7 \\ \hline 2 & \end{array}$$

$$\frac{A + B + 8C - 15}{10C} = ?$$

- A) 2 B) 3 C) 5 D) 7 E) 9

7. Bugün günlerden Perşembe olduğuna göre, 50 gün önce hangi gün olur?

If today is Thursday, what was the day 50 days ago?

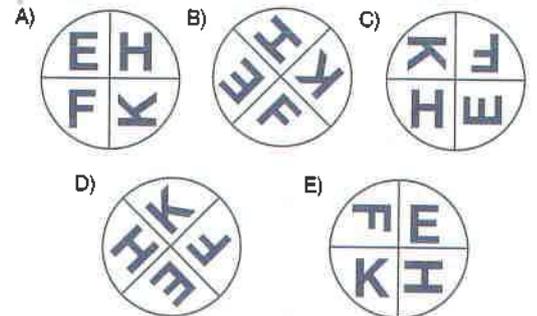
- A) Pazartesi / Monday
B) Salı / Tuesday
C) Çarşamba / Wednesday
D) Perşembe / Thursday
E) Cuma / Friday

8.



Aşağıdakilerden hangisi yandaki şeklin döndürülmüş halidir?

Which of the following is the left figure rotated?



9. I. II. III.

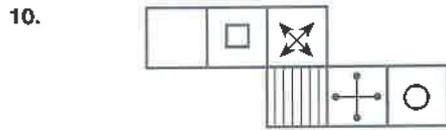
5		
2		32
3		16
7		
8		11
		7

4		
3		81
15		9
18		
11		18
		9

3		
5		A
7		B
15		
7		C
		12

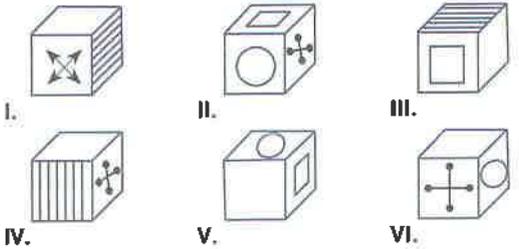
$$A - B + C = ?$$

- A) 53 B) 63 C) 73 D) 83 E) 93



Yukarıdaki şekil katlanarak bir küp oluşturulduğunda, aşağıdakilerden hangi ikisi elde edilir?

Which two of the following will be obtained when the figure above is folded from a cube?



- A) I.ve IV. B) II.ve VI. C) III.ve V.
D) II.ve V. E) III.ve VI.

11.

K
K I K
K I T I K
K I T N T I K
K I T N A N T I K
K I T N A M A N T I K

↑

M harfinden başlayarak komşu harfler takip edilerek MANTIK yazısı kaç farklı biçimde okunabilir?

How many possible ways are there to read the word MANTIK if it is allowed to start from the letter M and follow neighboring letters?

- A) 60 B) 63 C) 65
D) 68 E) 70

12.

1		
2	5	
3	2	1

2		
3	13	
5	3	2

3		
4	25	...
7	4	3

8		
9	Y	
X	9	8

$$X + Y = ?$$

- A) 138 B) 146 C) 154
D) 162 E) 170

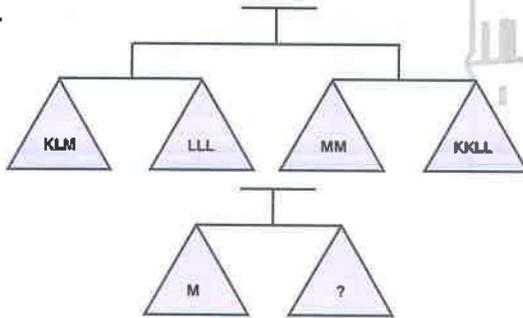
13.

+	x	y	x + y
x	a	b	c
y	40	d	z
x - y	32	e	t

$$2z - t = ?$$

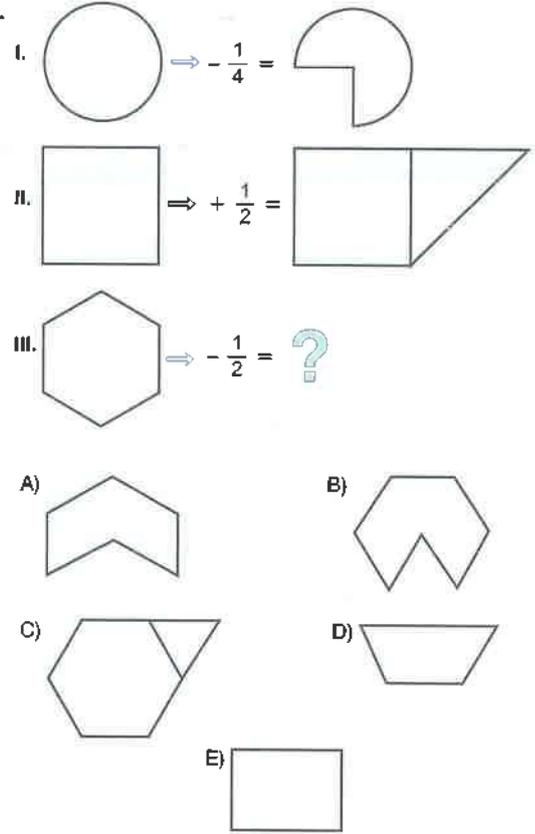
- A) a B) b C) c D) d E) e

14.



- A) KK B) LL C) KKL
D) KKK E) KLL

15.



16. Sara, 100 sayısından başlayarak ileriye doğru altışar altışar saydığıında üç basamaklı KLM sayısına ulaşır O bu sayıdan geriye doğru on beşer on beşer saydığıında 70 sayısına ulaşır.

KLM bu şartı sağlayan en küçük üç basamaklı sayı olduğuna göre, K+L+M toplamı kaçtır?

Sara is starting from 100 and she is counting forward six by six till reaching the three-digit number KLM.

Then Sara starts from this number and counts backward fifteen by fifteen until reaching the number 70. If KLM is such a smallest three-digit number satisfying this condition, what is K+L+M = ?

- A) 3 B) 4 C) 5
D) 6 E) 7

17. n ve m pozitif tam sayılar olmak üzere

n and m are positive integer numbers

$$T(n, m) = n^1 \cdot n^2 \cdot \dots \cdot n^m$$

$$T(3, 2) = 3^1 \cdot 3^2 = 27$$

$$T(4, m) = T(2, 3)$$

$m = ?$

A) 1

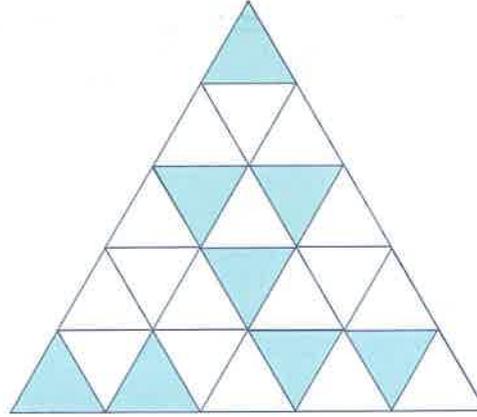
B) 2

C) 3

D) 4

E) 5

19.



Yukarıdaki şeklin yüzde kaçını boyalıdır?

What percentage of the figure above is shaded?

A) 25

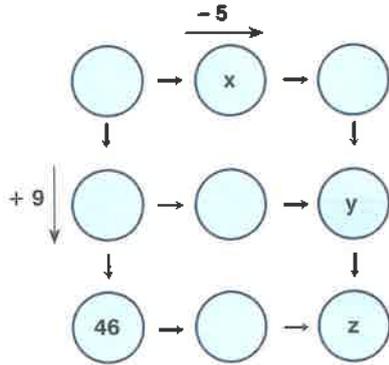
B) 32

C) 36

D) 40

E) 48

18.



$x - y + z = ?$

A) 26

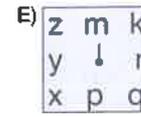
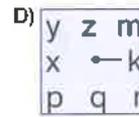
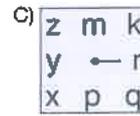
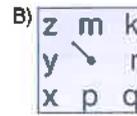
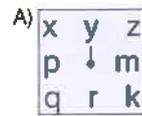
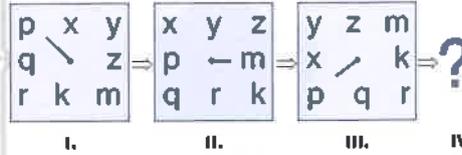
B) 28

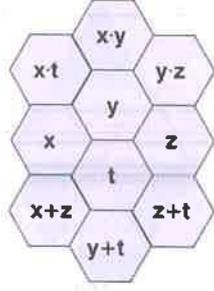
C) 30

D) 32

E) 34

20.





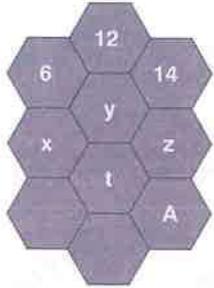
Yukarıdaki şekilde x, y, z ve t sayıları pozitif tam sayılardır.

In the figure above, x, y, z and t are positive integers.

Buna göre, 21. ve 22. soruları cevaplayınız.

Accordingly, answer questions 21 and 22 based on the figure above.

21.



$A = ?$

A) 6

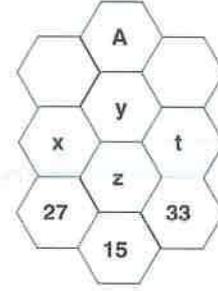
B) 7

C) 8

D) 9

E) 10

22.



$\max(A) = ?$

A) 9

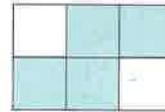
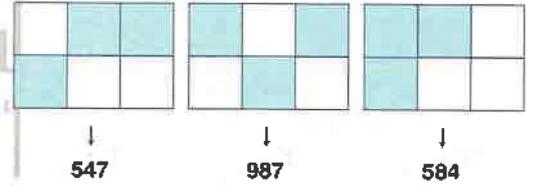
B) 14

C) 16

D) 18

E) 20

23.



A) 5847

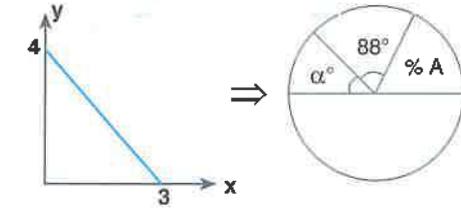
B) 5984

C) 7594

D) 8547

E) 5947

24.

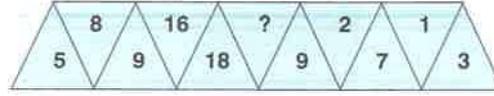


$$x = -12, y = \alpha$$

$$A = ?$$

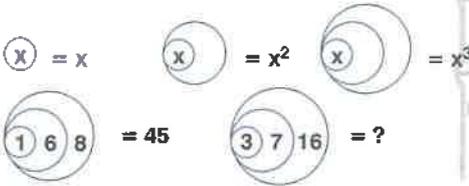
- A) 12 B) 15 C) 20
D) 24 E) 25

26.



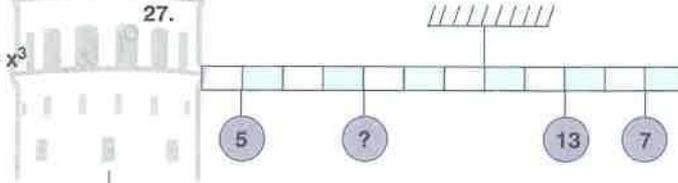
- A) 19 B) 27 C) 32
D) 48 E) 53

25.



- A) 37 B) 76 C) 88
D) 92 E) 124

27.



Yukarıdaki terazi dengede olduğuna göre, soru işareti (?) yerine aşağıdakilerden hangisi gelmelidir?

If the scale above is balanced, which of the following should replace the question (?) mark?

- A) 8 B) 12 C) 13
D) 16 E) 17

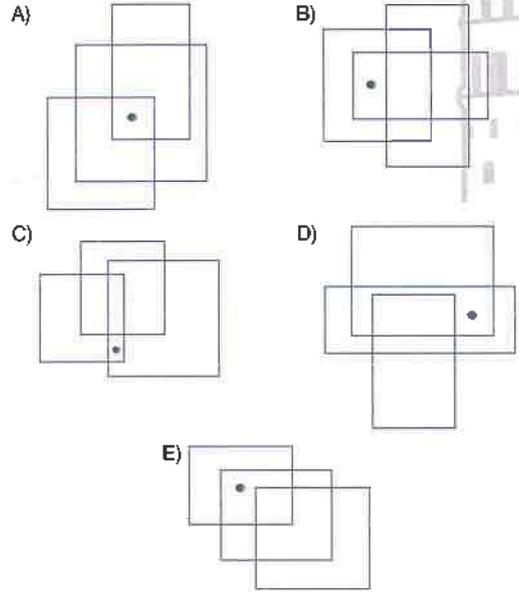
28.

4	12	3	→	52
6	8	4	→	50
7	9	9	→	64
5	10	2	→	?

- A) 46 B) 55 C) 60
D) 64 E) 72

29. Aşağıdaki şekillerden hangisi diğerlerinden farklıdır?

Which one of the following figures is different from the others?



30.

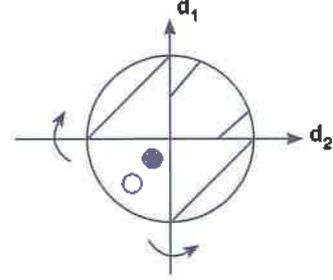
1		a		2
	5		4	
	2		b	
	c	4		5

Yukarıdaki 5x5 tabloda her satır, sütun ve farklı bölgede 1,2,3,4 ve 5 sayıları birer kez yerleştirilecek. Buna göre, $a + b + c = ?$

In the above 5x5 table, the numbers 1, 2, 3, 4, and 5 will be placed once in each row, column, and different regions.

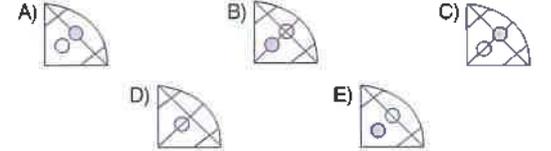
- A) 4 B) 5 C) 6 D) 7 E) 8

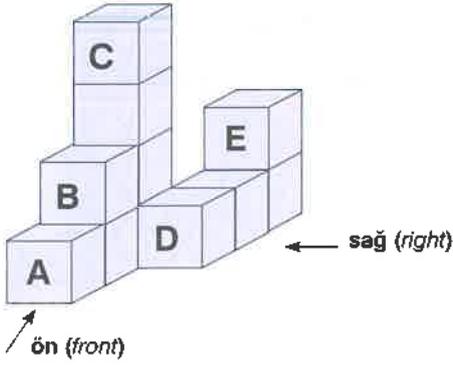
31.



Yukarıdaki şekil önce d_1 sonra d_2 doğrusu etrafında ök yönünde katlanırsa oluşan şekil aşağıdakilerden hangisidir?

If the figure above is respective folded around d_1 and d_2 in the given directions by rows, what is the obtained shape?





Yukarıdaki şekilde göre 32. ve 33. soruları cevaplayınız.

Answer questions 32 and 33 according to the above figure.

32. Verilen şekle yukarıdan bakıldığında kaç küp görülmektedir?

How many cubes are shown when looking from the top?

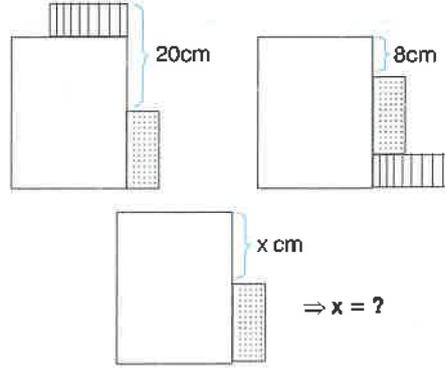
- A) 4 B) 5 C) 6 D) 7 E) 8

33. Harflerle belirtilen küplerden hangisi çıkartılırsa verilen şeklin sağdan görünümü değişmez?

Which of the following cubes can be removed so that the view of the figure from the right remains the same?

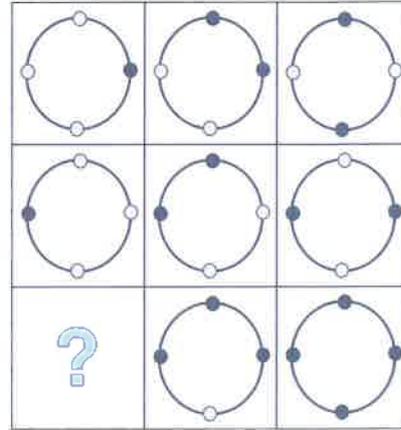
- A) A B) B C) C D) D E) E

34.



- A) 6 B) 8 C) 12 D) 14 E) 16

35.



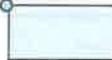
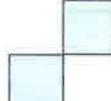
- A) B) C)
 D) E)

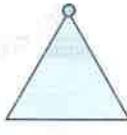
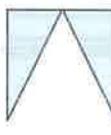
36. aaaabaabca...

dizisinin devamında aşağıdakilerden hangisi gelmelidir?

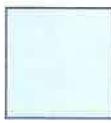
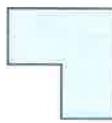
Which of the following should come next to complete the sequence above?

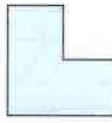
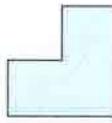
- A) abcaabca B) abcabca C) bcaabca D) bacadaab E) abcdaabc

37. I.   → 

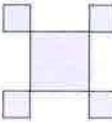
II.   → 

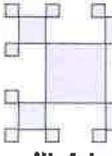
III.   → ?

A)  B)  C) 

D)  E) 

36. I. Adım  I. Step

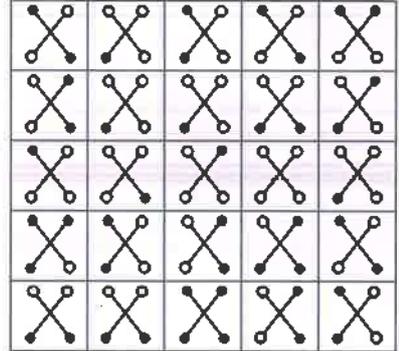
II. Adım  II. Step

III. Adım  III. Step

Yukarıdaki ilk 3 adımı verilen şeklin altıncı adımındaki kare sayısı dördüncü adımındaki kare sayısından kaç fazladır?

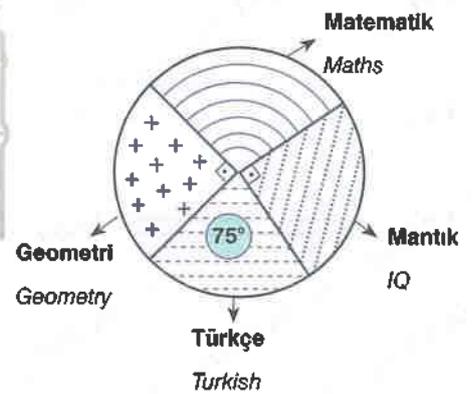
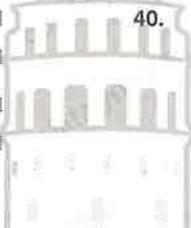
What is the number of squares in the sixth step of the figure given in the first 3 steps above than the number of squares in the fourth step?

- A) 324 B) 360 C) 432
D) 485 E) 512

39.  

A)  B)  C) 

D)  E) 



Bir deneme sınavındaki soru sayılarının branşlara göre dağılımı yukarıdaki grafikte verilmiştir. Bu sınavdaki matematik soru sayısı Türkçe soru sayısından 10 fazla olduğuna göre, bu deneme sınavındaki toplam soru sayısı kaçtır?

In the graph above, it is shown the distribution of numbers of questions in a trial exam according to the courses. If there 10 more maths questions than Turkish questions in this trial exam, how many total questions are there in the exam?

- A) 80 B) 90 C) 100
D) 110 E) 120

1. $\frac{TANE}{HANE} = PQQQ$

$\frac{GALATA}{BAŞARI} = ?$

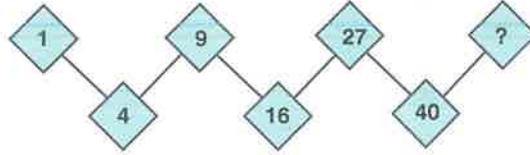
- A) QQPPQQ B) PQPPPQ C) QPQPQP
D) PQPQPP E) PQQPQP

2.

1234	2106
5653	1343
6441	6224
?	4360

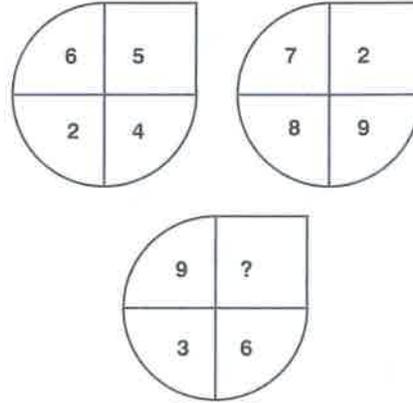
- A) 3064 B) 2543
D) 3215 E) 2156

3.



- A) 49 B) 53 C) 57
D) 59 E) 60

4.



- A) 2 B) 3 C) 5 D) 6 E) 7

5. $15 \odot 25 = 20$

$12 \odot 33 = 25$

$16 \odot 26 = 30$

$24 \odot 52 = ?$

A) 10

B) 26

C) 35

D) 19

E) 51

7.

K	1	4	2
L	M	N	3
2	3	O	4
4	2	P	1

$\Rightarrow K - L + M - N + O - P = ?$

A) -1

B) -2

C) 3

D) 1

E) 2

6.

x	4^a	4^b	4^c
4^a		$\frac{1}{2}$	
4^b			8
4^c	32		

$\Rightarrow a + b + c = ?$

A) $\frac{3}{2}$

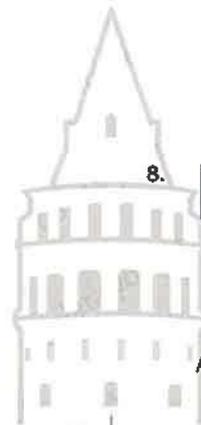
B) $\frac{7}{4}$

C) 2

D) $\frac{9}{2}$

E) $\frac{11}{4}$

8.



15		24		30		12		25		16
	6				?				4	
	3				6				5	

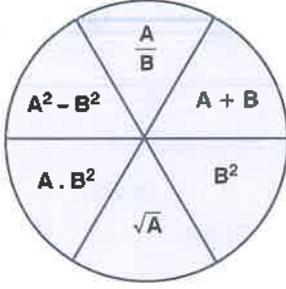
A) 2

B) 3

C) 4

D) 5

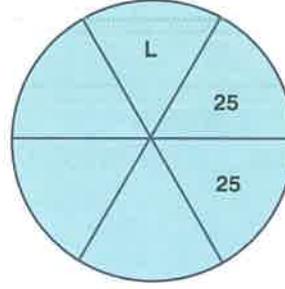
E) 6



Yukarıdaki şekle göre 9. - 11. soruları birbirinden bağımsız olarak cevaplayınız.

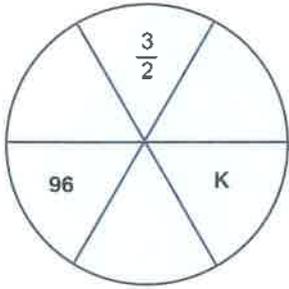
Answer questions 9 - 11 independently according to the figure above.

10.


 $\Rightarrow L = ?$

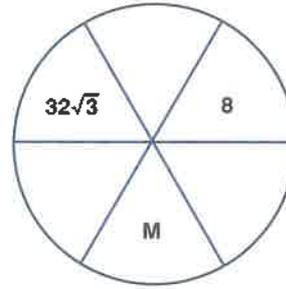
- A) 5 B) -5 C) 6 D) -6 E) 7

9.


 $\Rightarrow K = ?$

- A) 16 B) 25 C) 36 D) 64 E) 81

11.


 $\Rightarrow M = ?$

- A) $4\sqrt{3}$ B) $\sqrt{3}+1$ C) 8
D) $\sqrt{3}-1$ E) 7

12. 11, 121, 312, 432, ?

- A) 254 B) 336 C) 358
D) 435 E) 532

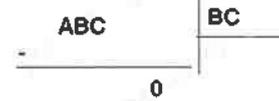
13. I. $(a \otimes b)^3 - (a \oplus b) = 2a - b^2$

II. $(a \oplus b)^3 - (a \otimes b) = b - 2a$

III. $(5 \otimes 3) + (5 \oplus 3) = ?$

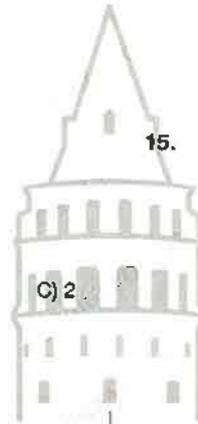
- A) 1 B) -2
D) -3 E) -6

14.

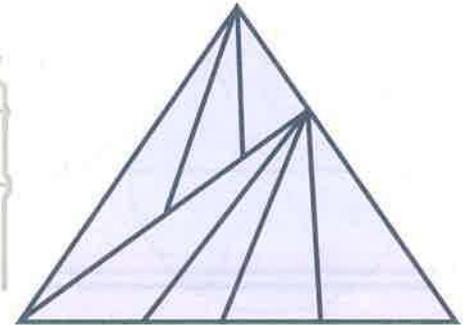


$\Rightarrow \max(ABC) = ?$

- A) 240 B) 276 C) 360
D) 480 E) 546



15.

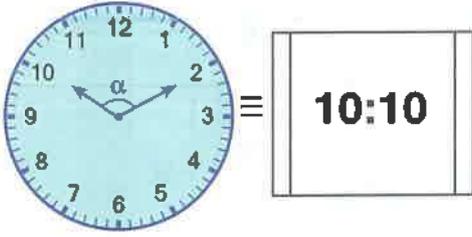


Yukarıdaki şekilde kaç üçgen vardır?

How many triangles are there in the figure above?

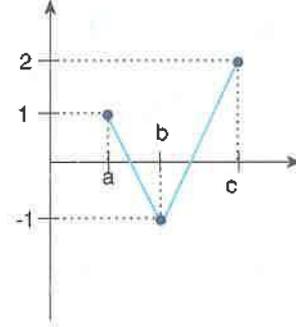
- A) 16 B) 17 C) 18 D) 19 E) 20

16.

 $\Rightarrow \alpha = ?$

- A) 105 B) 110 C) 115
D) 120 E) 125

18.



$a^3 + b^3 + c^3 = 64$

$\Rightarrow a^2 + b^2 + c^2 = ?$

- A) 21 B) 24 C) 27
D) 30 E) 34

17.

28		Y
		32
	X	

Yukarıdaki tabloda boş kalan yerlere 24, 36, 40, 44, 48, 52, 56 sayıları satır, sütun ve köşegen toplamları eşit olacak biçimde yerleştirilecektir.

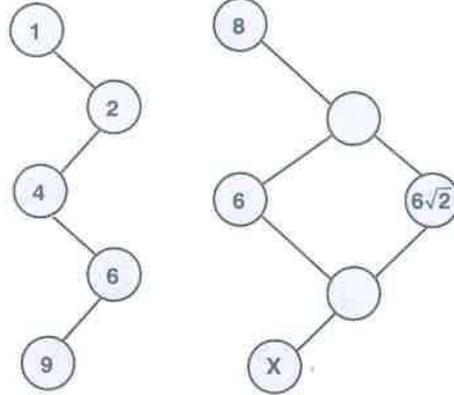
Buna göre, $3X - 2Y$ ifadesinin değeri kaç olmalıdır?

In the table above, numbers 24, 36, 40, 44, 48, 52, 56 are placed in the empty entries in a way that the sum of entries in each row, column, and diagonal is the same.

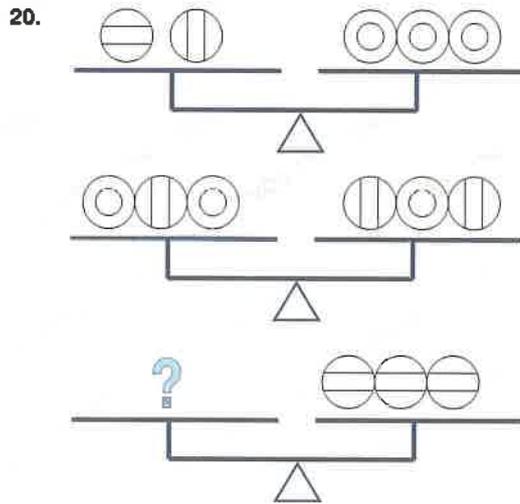
According to this information, what is the value of $3X - 2Y$?

- A) -5 B) -2 C) 0
D) 4 E) 12

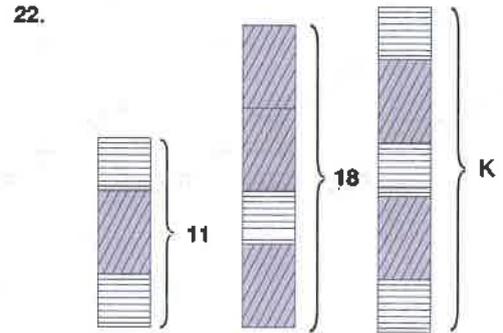
19.

 $\Rightarrow X = ?$

- A) 12 B) 16 C) 18
D) 20 E) 24

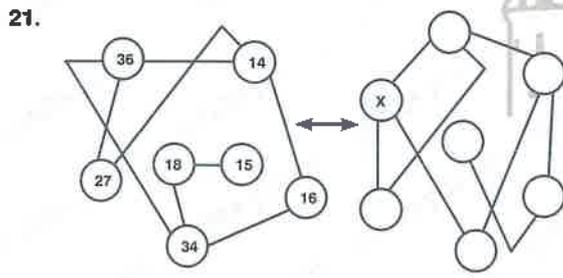


- A) ○○○○ ○ B) ○○○○ ○
- C) ○○○○ ○ D) ○○○○ ○
- E) ○○○○ ○



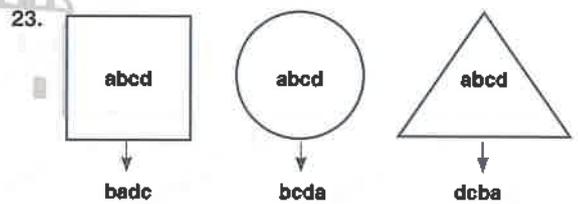
⇒ K = ?

- A) 19 B) 21 C) 23
- D) 25 E) 27



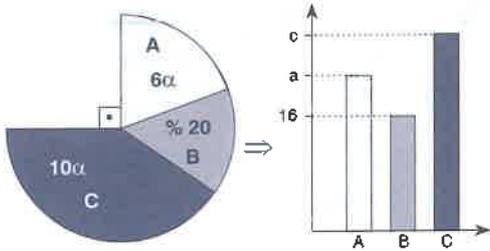
⇒ X = ?

- A) 14 B) 16 C) 27
- D) 34 E) 36



- A) 5647 B) 5764 C) 6574
- D) 6475 E) 7564

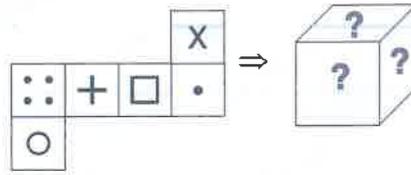
24.



$\Rightarrow \sqrt{a+c} = ?$

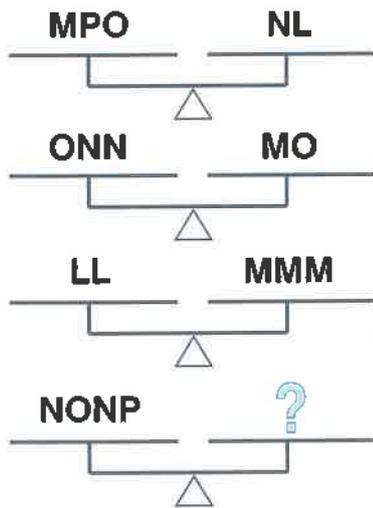
- A) 6 B) 8 C) 12
 D) 16 E) 20

26.



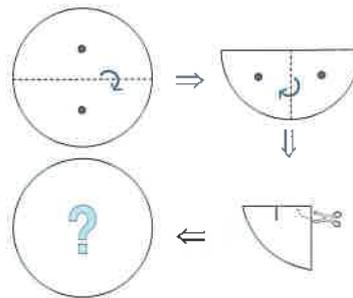
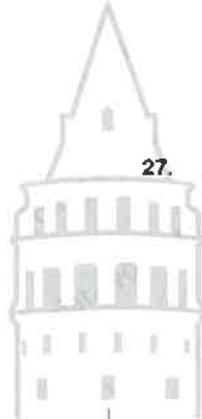
- A) B) C) D) E)

25.



- A) PP B) OO C) NNN
 D) MM E) LL

27.



- A) B) C) D) E)

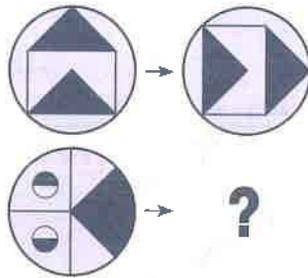
28.

	▽	○	□
	5	A	1
	B	6	2
	4	3	C

$$\Rightarrow A^2 + B^2 + C^2 = ?$$

- A) 25 B) 30 C) 35
D) 40 E) 45

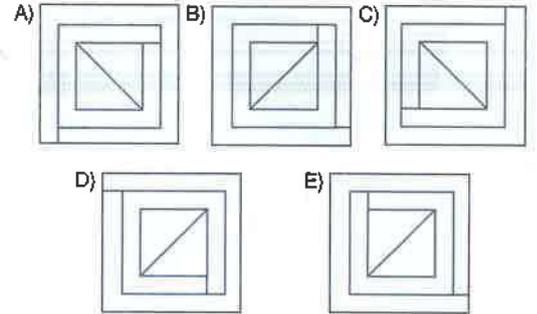
29.



- A) B) C)
D) E)

30. Aşağıdakilerden hangisi farklıdır?

Which of the following is different?



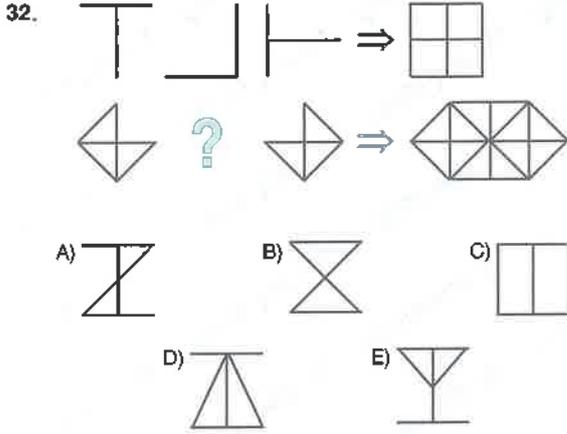
31. Bir kolejde 8 seçmeli dersten ikisi aynı saatte verilmektedir.

Bu derslerden yarısını almak zorunda olan Ali ders seçimini kaç farklı şekilde yapabilir?

There are 8 elective courses in a college and two of these courses are given at the same time.

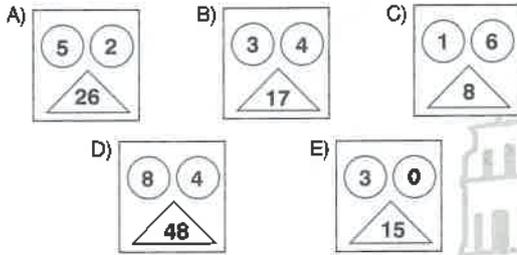
If Ali has to take half of the courses, how many different choices does Ali have to make his course selection?

- A) 40 B) 48 C) 55
D) 60 E) 65



33. Aşağıdakilerden hangisi farklıdır?

Which of the following is different?



34. Ardışık üç tamsayının kareleri toplamı olarak yazılabilen sayılara karesel -3 sayısı denir.

A number is called square -3 if it can be written as the sum of the squares of three consecutive integers.

Örnek (Example) : $110 = 5^2 + 6^2 + 7^2$

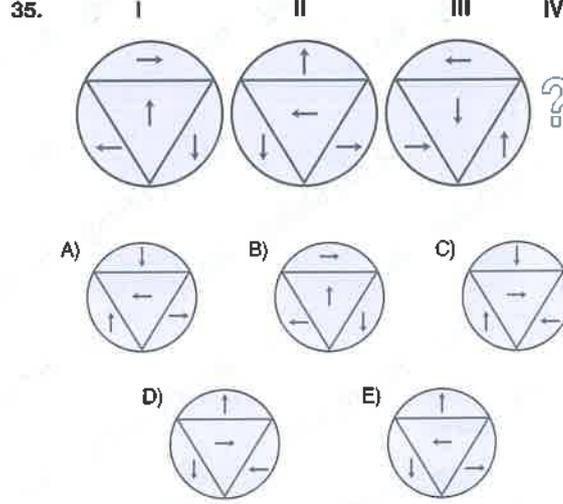
110 bir karesel -3 sayıdır.

110 is a square -3 number.

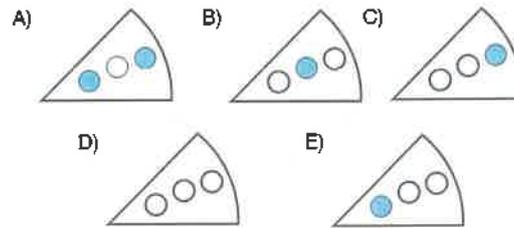
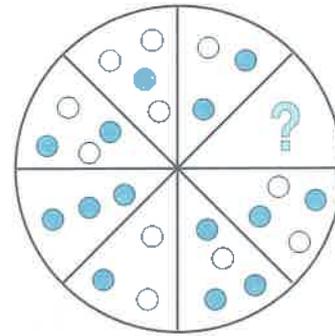
Aşağıdakilerden hangisi bir karesel -3 sayı değildir?

Which of the following is not a square -3 number?

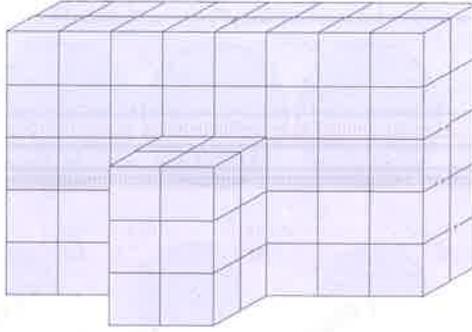
- A) 2 B) 5 C) 14
D) 29 E) 48



36.



37.

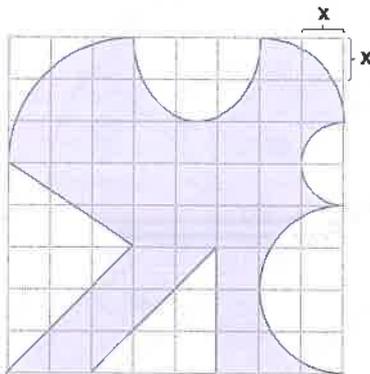


Yukarıdaki eş küplerden oluşan şeklin tüm yüzeyleri maviye boyanırsa, iki yüzü mavi boyalı kaç küp oluşturur?

How many cubes will get two faces painted blue if all surfaces of given object above is painted blue?

- A) 32 B) 34 C) 36
D) 38 E) 40

38.

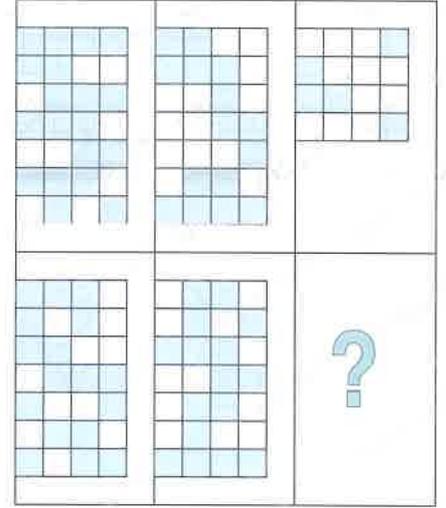


Taralı Alan = ? x^2

Shaded Area = ? x^2

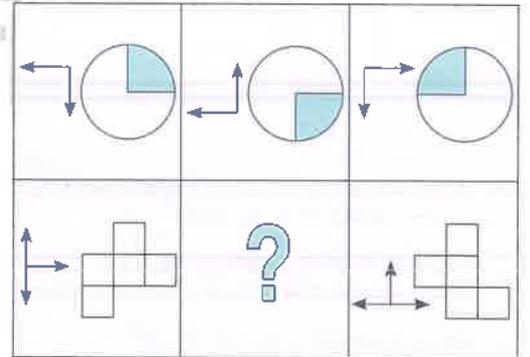
- A) $36 + \frac{\pi}{4}$ B) $40 - \frac{\pi}{2}$ C) $35 + \pi$
D) $38 - \frac{\pi}{4}$ E) $30 + \frac{\pi}{2}$

39.



- A) B) C) D) E)

40.



- A) B) C) D) E)