

ÇÖZÜMLER

1. 2 6 21 88 ?

$$2.2 + 2 = 6$$

$$6.3 + 3 = 21$$

$$21.4 + 4 = 88$$

$$88.5 + 5 = 445 \text{ bulunur.}$$

Cevap: D

2. I. $\begin{array}{ccccc} 4 & 12 & 10 & 30 & 28 \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \\ \times 3 & -2 & \times 3 & -2 & \end{array}$

II. $\begin{array}{ccccc} 13 & 26 & 23 & 46 & 43 \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \\ \times 2 & -3 & \times 2 & -3 & \end{array}$

III. $\begin{array}{ccccc} 14 & 10 & 30 & 26 & 78 \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \\ -4 & \times 3 & -4 & \times 3 & \end{array}$

IV. $\begin{array}{ccccc} 8 & 5 & 20 & 17 & 68 \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \\ -3 & \times 4 & -3 & \times 4 & \end{array}$

Cevap: E

3. Son harf E üç adet rakamlarda E = 5 İ = 3 bulunur.

Başta iki adet H var rakamlarda H = 7 olur.

$$H \text{ İ } L E \rightarrow 7 \ 3 \ 4 \ 5$$

$$L = 4$$

$$H A L E \rightarrow 7 \ 2 \ 4 \ 5$$

$$A = 2$$

$$A \text{ İ } L E \rightarrow 2 \ 3 \ 4 \ 5$$

$$M A V \text{ İ } \rightarrow 8 \ 2 \ 1 \ 3$$

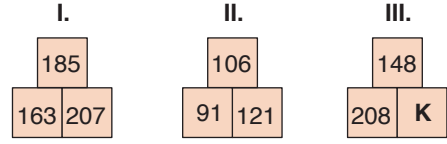
$$M = 8, \ V = 1$$

$$Y E N \text{ İ } \rightarrow 6 \ 5 \ 9 \ 3$$

$$Y = 6, \ N = 9$$

Cevap: E

4.



alt kutuları topla 2'ye böl

$$\frac{163 + 207}{2} = \frac{370}{2} = 185$$

$$\frac{91 + 121}{2} = \frac{212}{2} = 106$$

$$\frac{208 + K}{2} = 148$$

$$208 + K = 296$$

$$K = 296 - 208$$

$$K = 88 \text{ bulunur.}$$

Cevap: A

TASARI EĞİTİM YAYINLARI

5. $\bullet \rightarrow \text{çarpma}$, $\blacktriangle \rightarrow \text{toplama}$

$$11 \blacktriangle (2 \bullet 9) = 11 \blacktriangle 18 = 29$$

$$9 \blacktriangle (6 \bullet 8) = 9 \blacktriangle 48 = 57$$

$$16 \blacktriangle (9 \bullet 4) = 16 \blacktriangle 36 = 52$$

$$5 \blacktriangle (11 \bullet 4) = 5 \blacktriangle 44 = 49 \text{ bulunur.}$$

Cevap: D

6.

I.  +  = 9

II.  +  = 4

III.  -  = 12

IV.  -  = ?

$$\left. \begin{array}{l} 4 + 3 = 7 \\ 4 - 2 = 2 \end{array} \right\} 7 + 2 = 9$$

$$\left. \begin{array}{l} 6 + 4 = 10 \\ 1 - 7 = -6 \end{array} \right\} 10 - 6 = 4$$

$$\left. \begin{array}{l} 5 + 8 = 13 \\ 3 - 2 \end{array} \right\} 13 - 1 = 12$$

$$\left. \begin{array}{l} 8 + 3 = 11 \\ 4 - 7 = -3 \end{array} \right\} 11 - (-3) = 14$$

Cevap: D

TASARI EĞİTİM YAYINLARI

7.

1. satır 1 sayı

2. satır 2 sayı

3. satır 3 sayı

⋮

n. satır + n sayı

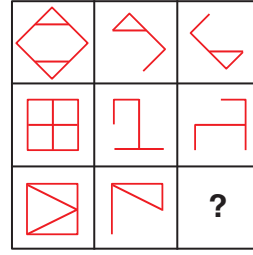
n. satırının sonuna → $1 + 2 + 3 + \dots + n$
 kadar toplam $= \frac{n \cdot (n + 1)}{2}$ sayı

$$= \frac{n \cdot (n + 1)}{2} \cong 49$$

⇒ n = 10 olur.

Cevap: D

8.



II ve III. şeklin birleşimi I. şekil olmakta



Cevap: C

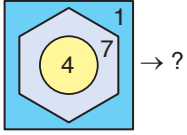
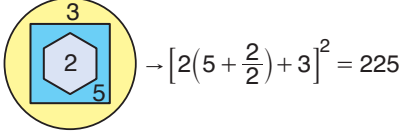
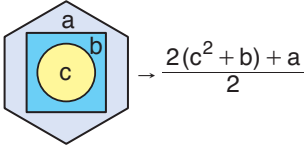
9.

$$\begin{array}{r} \text{KL } 4 \mid \text{KL} \\ - \text{KL} \mid 10 \\ \hline 004 \end{array}$$

a + b = 10 + 4 = 14 bulunur.

Cevap: E

10.

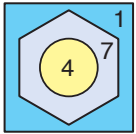


 → içindekinin karesi

 → içindikilerin toplamının 2 katı

 → içindikilerin toplamının yarısı

O halde



$$2\left(\left(\frac{4^2 + 7}{2}\right) + 1\right) = 2 \cdot \frac{23}{2} + 2$$

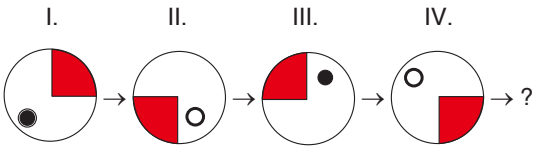
$$= 23 + 2$$

$$= 25$$

bulunur.

Cevap: B

11.



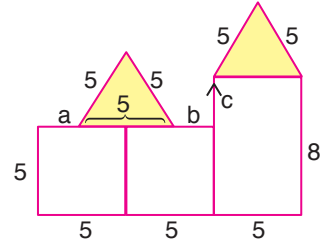
● → bir adım saat yönü ters ilerliyor bir siyah bir beyaz olmakta

 → bir adımda bir dilim ikinci adımda 2 dilim ilerlemekte.



Cevap: E

12.



$$c = 8 - 5 = 3$$

$$a + b = 10 - 5 = 5$$

$$\text{Çevre} = 8.5 + a + b + c + 8$$

$$= 40 + 5 + 3 + 8$$

$$= 56$$

Cevap: E

13.



Şekiller birlikte saat yönünde döndürülmekte.



Cevap: A

14.

$$\text{I. } a \bullet b = 5a + 2b$$

$$\text{II. } a \bullet b = 4(a \star b) + 2$$

$$\text{III. } 4 \star 5 = ?$$

$$4 \bullet 5 = 4(4 \star 5) + 2$$

$$5.4 + 2.5 = 4(4 \star 5) + 2$$

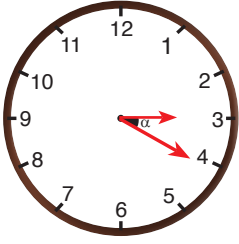
$$30 - 2 = 4(4 \star 5)$$

$$\frac{28}{4} = 4 \star 5$$

$$7 = 4 \star 5 \text{ bulunur.}$$

Cevap: B

15.



$$\alpha = \left| \frac{11. \text{ dakika} - 60. \text{ saat}}{2} \right|$$

$$\alpha = \left| \frac{11.20 - 60.3}{2} \right|$$

$$\alpha = \left| \frac{220 - 180}{2} \right|$$

$$\alpha = |-20| = 20^\circ \text{ bulunur.}$$

Cevap: B

17.

+	a	b	c
a			30
b			
c			

I tablodan

$$a + c = 30$$

x	a	b	c
a		112	
b			128
c			

II. tablodan

$$a.b = 112$$

$$+ \quad b.c = 128$$

$$b(a + c) = 240$$

$$\underbrace{\quad}_{30}$$

$$b = 8$$

Cevap: E

16.

I. $\rightarrow \frac{3^3 + 1^2}{4.3} = \frac{7}{3}$

II. $\rightarrow \frac{123}{40}$

III. $\rightarrow ?$

taralı şekil sayısının küpü

+ taralı olmayan şekil sayısının karesi

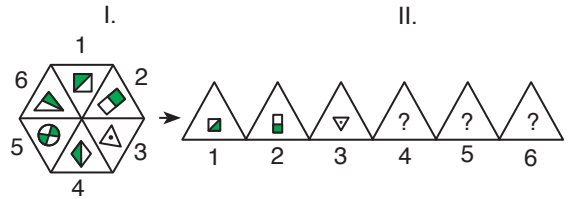
şekil sayısı x taralı şekil sayısı

$$\begin{aligned} & \frac{2^3 + 4^2}{6.2} \\ &= \frac{8 + 16}{12} = \frac{24}{12} = 2 \end{aligned}$$

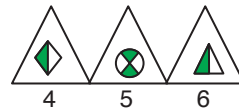
Cevap: E

TASARI EĞİTİM YAYINLARI

18.



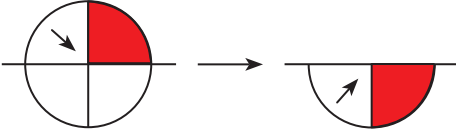
Şeklimiz düzenlendiğinde



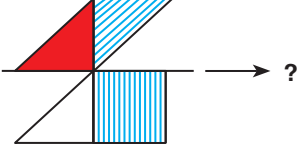
Cevap: A

19.

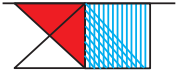
I.



II.



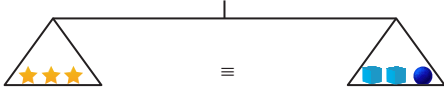
x eksenine göre simetri kısıması üstteki şekil simetri şekilde alttakinin üstüne düşmekte.



Cevap: D

20.

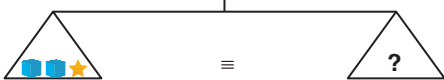
I.



II.



III.



$$3 \star = \begin{matrix} \text{blue cube} & \text{blue cube} & \text{blue circle} \\ \downarrow & \downarrow & \downarrow \\ 6 & 5 & 8 \end{matrix}$$

$$4 \star = 3 \text{ blue circle} \\ \downarrow \quad \downarrow \\ 6 \quad 8$$

$$B) \text{ blue circle} = 8 + 8 = 16$$

$$\begin{matrix} \text{blue cube} & \text{blue cube} & \text{yellow star} \\ \downarrow & \downarrow & \downarrow \\ 5 & 5 & 6 \end{matrix} = 16$$

Cevap: B

21. I.

$$\begin{matrix} \boxed{a} & \boxed{b} \\ \boxed{c} \end{matrix} \Rightarrow \frac{3}{4} \left(a + \frac{b}{2} + \frac{3c}{4} \right)$$

II.

$$\begin{matrix} \boxed{4} & \boxed{3} \\ \boxed{5} \end{matrix} \Rightarrow \left(5 + \frac{4}{2} + \frac{3 \cdot 3}{4} \right) = \frac{37}{4}$$

III.

$$\begin{matrix} \boxed{4} & \boxed{5} & \boxed{3} \\ \boxed{6} & \boxed{2} & \boxed{6} \end{matrix} \Rightarrow ??$$

$\boxed{}$ → içi

$\boxed{}$ → içinin yarısı

$\boxed{}$ → içinin toplamının $\frac{3}{4}$ 'ü

$$\begin{matrix} \boxed{4} & \boxed{5} & \boxed{3} \\ \boxed{6} & \boxed{2} & \boxed{6} \end{matrix}$$

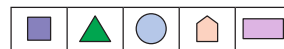
$$\frac{4 + 5 \cdot \frac{3}{4} + \frac{3}{2} + \frac{6}{2} + \frac{2}{2} + 6}{2}$$

$$\frac{4 + \frac{15}{4} + \frac{11}{2} + 6}{2} = \frac{40 + 15 + 22}{4}$$

$$= \frac{77}{8}$$

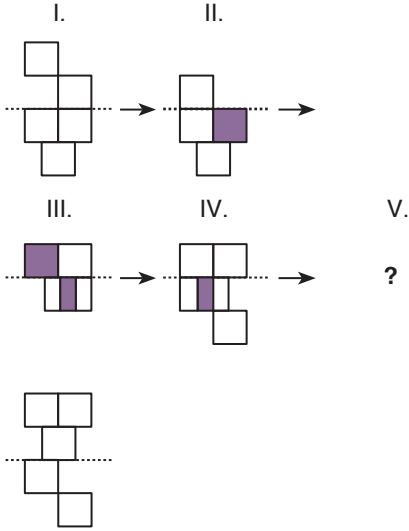
Cevap: A

22. Şekiller 2 kare sağa kayıyor.



Cevap: B

23.



Cevap: D

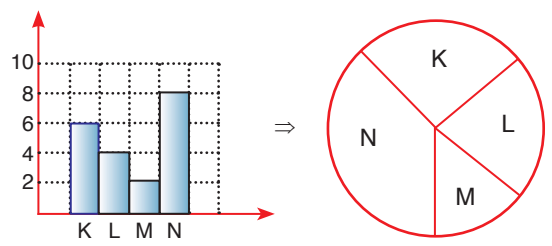
24.



Üstten bakınca C seçeneği gözükür.

Cevap: C

25.



$$K^\circ = ? \quad L^\circ = ? \quad M^\circ = ? \quad N^\circ = ?$$

$$K = 6a$$

$$L = 4a$$

$$M = 2a$$

$$+ \quad N = 8a$$

$$20a = 360^\circ$$

$$a = 18^\circ$$

$$K = 6.18 = 108^\circ$$

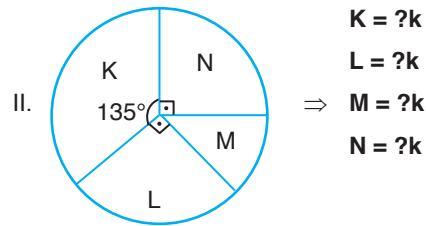
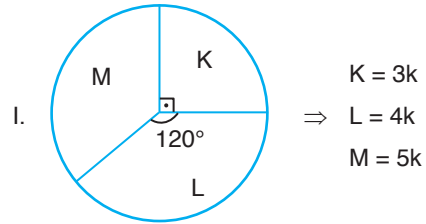
$$L = 4.18 = 72^\circ$$

$$M = 2.18 = 36^\circ$$

$$N = 8.18 = 144^\circ$$

Cevap: D

26.



$$K = 3k$$

$$L = 4k$$

$$M = 5k$$

$$K = 90^\circ$$

$$M = 150^\circ$$

$$4K = 120^\circ$$

$$K = 30^\circ$$

II. şekilde

$$K = 135^\circ$$

$$M = 45^\circ$$

$$N = 90^\circ$$

$$L = 90^\circ$$

$$K = 3k$$

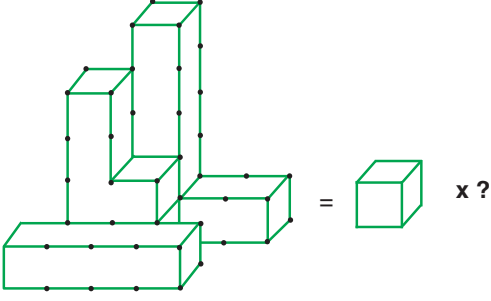
$$M = K$$

$$N = 2K$$

$$L = 2K$$

Cevap: C

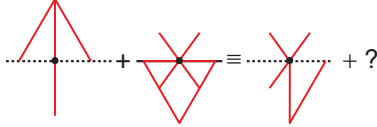
27.



Şekildeki noktaları birleştirdiğimizde 17 küp elde edilmekte

Cevap: A

28.

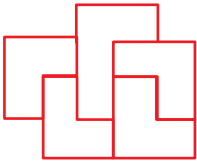


Sağ tarafta eksik olan şekil



Cevap: E

29.



5 parça var.

Cevap: B

30.

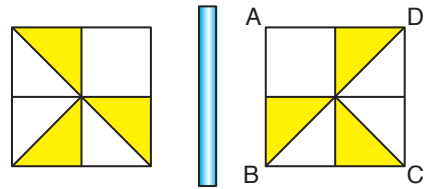
#	♥	⊗	△	▲	■	⊙	●
♥	♥	⊗	△	▲	■	⊙	●
⊗	●	♥	⊗	△	▲	■	⊙
△	⊙	●	♥	⊗	△	▲	■
▲	■	⊙	●	♥	⊗	△	▲
■	▲	■	⊙	●	♥	⊗	△
⊙	△	▲	■	⊙	●	♥	⊗
●	⊗	△	▲	■	⊙	●	♥

$$\begin{aligned}
 & \text{▲} \\
 & \text{[(● # △) # ?] # (⊙ # ▲) = ▲} \\
 & \text{△ # ? = ▲} \\
 & \downarrow \\
 & \text{⊙ olur.}
 \end{aligned}$$

Cevap: A

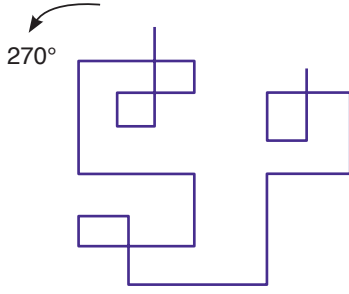
TASARI EĞİTİM YAYINLARI

31.

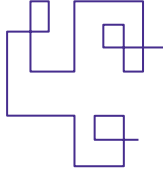


Cevap: B

32.

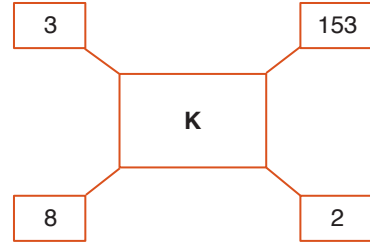


270° sola çevrildiğinde



Cevap: D

34.



$$b = 3$$

$$2$$

$$a^2 + b^2 = 153$$

$$b^2 - c^2 = 8$$

$$d =$$

$$a^2 + 9 = 153$$

$$9 - c^2 = 8$$

$$a^2 = 144$$

$$1 = c^2$$

$$a = 12$$

$$1 = c$$

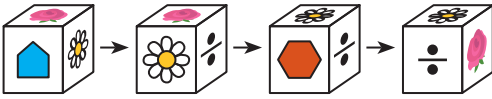
$$K = \frac{a+b+c}{d^2} = \frac{12+3+1}{2^2} = \frac{16}{4}$$

$$= 4$$

Cevap: D

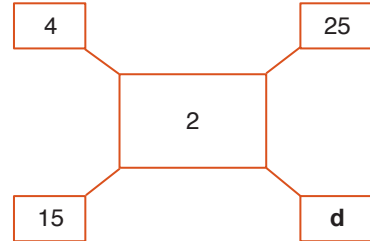
TASARI EĞİTİM YAYINLARI

33.



Cevap: A

35.



$$b = 4$$

$$?$$

$$a^2 + b^2 = 25$$

$$b^2 - c^2 = 15$$

$$d =$$

$$a^2 + 4^2 = 25$$

$$16 - c^2 = 15$$

$$a^2 = 9$$

$$1 = c^2$$

$$a = 3$$

$$1 = c$$

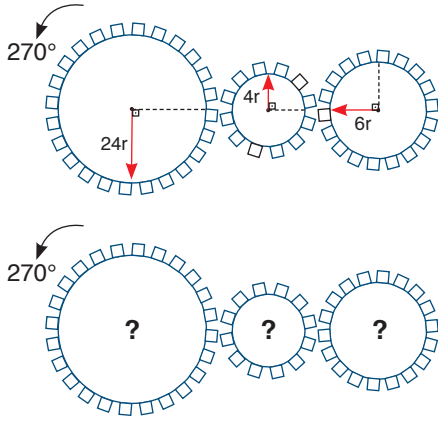
$$K = \frac{a+b+c}{d^2}$$

$$2 = \frac{3+4+1}{d^2} \Rightarrow d^2 = \frac{8}{2} = 4 = 2^2$$

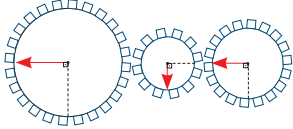
$$d = 2$$

Cevap: B

36.

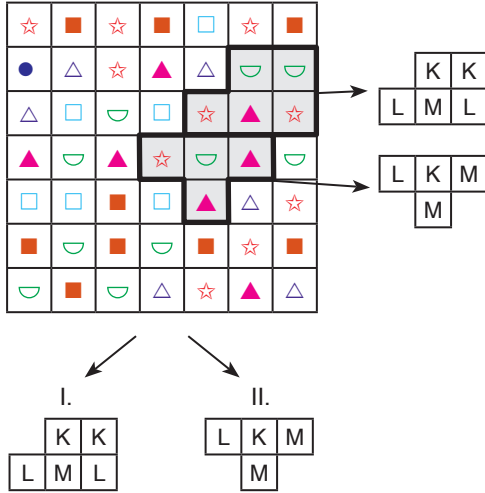


E)



Cevap: E

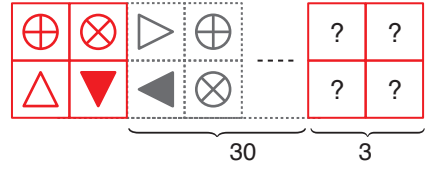
37.



K =  L = 
M = 

Cevap: E

38.

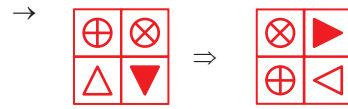


→ 33 br ilerliyor.

33:3 = 11 çeyrek tur.

$$\Rightarrow \begin{array}{r} 11 \\ - 8 \\ \hline 3 \end{array} \begin{array}{l} 4 \\ 2 \\ \hline 3 \end{array} \rightarrow 4 \text{ çeyrek tam tur}$$

3 → 3 çeyrek tur çevirmek yeter



Cevap: C

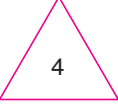
39.

★			
I.	1	0	2
II.	4	1	0
III.	0	1	0
IV.	0	2	2

I =  II =  III =  IV = 

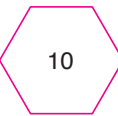
Cevap: D

40.

I.  $\Rightarrow 1$

II.  $\Rightarrow 0$

III.  $\Rightarrow 27$

IV.  $\Rightarrow ?$

I. $((\text{Şeklin içindeki sayı}) - (\text{Şeklin kenar sayısı}))^3$

$= (4 - 3)^3 = 1$

II. $(4 - 4)^3 = 0$

III. $(8 - 5)^3 = 3^3 = 27$

IV. $(10 - 6)^3 = 4^3 = 64$

Cevap: D

TASARI EĞİTİM YAYINLARI

41. $1 - \frac{1}{1 - \frac{2}{1 - \frac{1}{3}}} : \frac{1}{3}$

$= 1 - \frac{1}{1 - \frac{2}{\frac{2}{3}}} : \frac{1}{3}$

$= 1 - \frac{1}{1 - 3} : \frac{1}{3}$

$= 1 + \frac{1}{2} \cdot \frac{3}{1}$

$= 1 + \frac{3}{2} = \frac{5}{2}$

Cevap: B

42. $\frac{12}{0,009} : \left(\frac{0,03 - 0,003}{0,6} \right)^{-1}$
 $= \frac{12}{0,009} : \left(\frac{0,027}{0,6} \right)^{-1}$
 $= \frac{12000}{9} : \left(\frac{600}{27} \right)$
 $= \frac{12000}{9} \cdot \frac{27}{600}$
 $= 60$

Cevap: E

43. $16^{a-2b} = 1$

$81^{a+2b} = \frac{1}{9} \quad b = ?$

• $4^{2a-4b} = 4^0 \Rightarrow 2a - 4b = 0$

• $9^{2a+4b} = 9^{-1} \Rightarrow 2a + 4b = -1$

O halde

$-1/ \quad 2a - 4b = 0$

$2a + 4b = -1$

$-2a + 4b = 0$

$2a + 4b = -1$

$8b = -1$

$b = -\frac{1}{8}$

Cevap: B

44. $\sqrt{\frac{9}{25} - \frac{3}{5} + \frac{1}{4}} = ?$

$\sqrt{\left(\frac{3}{5} - \frac{1}{2}\right)^2} = \left| \frac{3}{5} - \frac{1}{2} \right|$
 $(2) \quad (5)$

$= \frac{1}{10}$ bulunur.

Cevap: A

$$45. \frac{2^{502} + 2^{501} + 2^{500}}{2^{-504} + 2^{-503} + 2^{-502}} = \frac{2^{500}(2^2 + 2^1 + 1)}{2^{-504}(1 + 2^1 + 2^2)}$$

$$= 2^{500+504}$$

$$= 2^{1004} \text{ bulunur.}$$

Cevap: E

$$46. \frac{\sqrt{x.z}}{a} = 3$$

$$\frac{\sqrt{x.y}}{b} = 5$$

$$x \quad \frac{\sqrt{y.z}}{c} = 7$$

$$\frac{\sqrt{x^2.y^2.z^2}}{a.b.c} = 3.5.7$$

$$\frac{x.y.z}{a.b.c} = 105 \text{ bulunur.}$$

Cevap: D

$$47. a = \sqrt{(1 - \sqrt{3})^2} = \underbrace{|1 - \sqrt{3}|}_{< 0} = -1 + \sqrt{3}$$

$$b = \sqrt{(\sqrt{3} - \sqrt{12})^2} = \sqrt{(\sqrt{3} - 2\sqrt{3})^2} = \sqrt{(-\sqrt{3})^2} = \sqrt{3}$$

$$a + b = -1 + \sqrt{3} + \sqrt{3} = 2\sqrt{3} - 1$$

Cevap: B

$$48. \frac{\sqrt{a}}{\sqrt{a} + \sqrt{b}} + \frac{\sqrt{b}}{\sqrt{a} - \sqrt{b}} = \frac{5}{4}$$

$$\frac{a - \sqrt{a.b} + \sqrt{a.b} + b}{a - b} = \frac{5}{4}$$

$$\frac{a + b}{a - b} = \frac{5}{4}$$

$$5a - 5b = 4a + 4b$$

$$a = 9b$$

$$\frac{a}{b} = 9 \text{ bulunur.}$$

Cevap: A

$$49. (x^2 + y^2)^2 = (\sqrt{7})^2$$

$$x^4 + y^4 + 2.x^2.y^2 = 7$$

$$x^4 + y^4 + 2.\underbrace{(x.y)^2}_1 = 7$$

$$x^4 + y^4 = 5$$

$$(x^2 - y^2)^2 = x^4 + y^4 - 2x^2.y^2$$

$$= 5 - 2 = 3$$

$$x^2 - y^2 = \sqrt{3}$$

$$x^4 - y^4 = (x^2 - y^2)(x^2 + y^2)$$

$$= \sqrt{3}.\sqrt{7}$$

$$= \sqrt{21} \text{ bulunur.}$$

Cevap: C

$$50. |x - 2| < 3 \Rightarrow -3 < x - 2 < 3$$

$$-1 < x < 5$$

$$\underbrace{|x + 3|}_{x > 0} + \underbrace{|x - 5|}_{x < 0} + \underbrace{|x - 6|}_{x < 0}$$

$$= x + 3 - x + 5 - x + 6$$

$$= 14 - x$$

Cevap: B

$$51. 3 + \frac{7}{2 - \frac{9}{x+3}} = 2 \Rightarrow x = ?$$

$$2 - \frac{9}{x+3} = -7$$

$$2 + 7 = \frac{9}{x+3} \Rightarrow \frac{9}{1} = \frac{9}{x+3}$$

$$x + 3 = 1 \Rightarrow \boxed{x = -2}$$

Cevap: B

$$\begin{array}{r}
 -2/ \quad 3a - 3b + 4c = 7 \\
 \hline
 \quad 2a - 6b + 8c = 2 \\
 \hline
 -6a + 6b - 8c = -14 \\
 + \quad 2a - 6b + 8c = 2 \\
 \hline
 -4a = -12 \\
 a = 3
 \end{array}$$

Cevap: A

$$\begin{array}{r}
 A \mid B \\
 - \quad \mid 3 \\
 \hline
 2
 \end{array}
 \qquad
 \begin{array}{r}
 B \mid 4 \\
 - \quad \mid c \\
 \hline
 2
 \end{array}$$

$$\begin{aligned}
 A &= 3B + 2 & B &= 4c + 2 \\
 A &= 3(4c + 2) + 2 \\
 A &= 12c + 8 \\
 &\downarrow \\
 &1 \\
 \min(A) &= 20 \text{ bulunur.}
 \end{aligned}$$

Cevap: C

$$53. \quad \underbrace{1-4}_{-3} + \underbrace{2-5}_{-3} + \underbrace{3-6}_{-3} + \dots + \underbrace{17-20}_{-3} = A$$

$$\text{Terim sayısı : } \frac{17-1}{1} + 1 = 17$$

O halde

$$A = -3 \cdot 17 = -51 \text{ bulunur.}$$

Cevap: E

$$56. \quad a, b, c \in \mathbb{Z}^+$$

$$3a = 4b$$

$$\frac{a}{b} = \frac{4k}{3k} \qquad \frac{b}{c} = \frac{3k}{8k}$$

O halde $k = 1$ için

$$a = 4, \quad b = 3, \quad c = 8$$

$$\min(a + b + c) = 4 + 3 + 8 = 15 \text{ bulunur.}$$

Cevap: D

$$54. \quad (63)_{10} = (223)_m$$

$$6 \cdot 10^1 + 3 \cdot 10^0 = 2 \cdot m^2 + 2 \cdot m^1 + 3 \cdot m^0$$

$$60 + 3 = 2m^2 + 2m + 3$$

$$2m^2 + 2m - 60 = 0$$

$$m^2 + m - 30 = 0$$

$$(m + 6)(m - 5) = 0$$

$$m = -6 \text{ ve } m = 5$$

Cevap: B

$$57. \quad \frac{(n-2)!}{(n+1)!} = \frac{1}{336}$$

$$\frac{(n-2)!}{(n-2)!(n-1) \cdot n \cdot (n+1)} = \frac{1}{336}$$

$$(n-1) \cdot n \cdot (n+1) = 336$$

$$6 \cdot 7 \cdot 8 = 336$$

$$n = 7$$

Cevap: C

58. x, y birer tamsayı

$$\left. \begin{array}{l} -3 \leq x < 8 \\ -6 < y \leq 14 \end{array} \right\} \max(2x - 3y) = ?$$

x ve y tamsayı olduğu için değer veririz.

$x \rightarrow \max$ $y \rightarrow \min$ olmalı

$$-3 \leq x < 8 \rightarrow \max(x) = 7$$

$$-6 < y \leq 14 \rightarrow \min(y) = -5$$

$$\begin{aligned} \Rightarrow \max(2x - 3y) &= 2 \cdot 7 - 3 \cdot (-5) \\ &= 14 + 15 \\ &= 29 \end{aligned}$$

Cevap: D

59. $\frac{a}{b} = \frac{c}{d} = \frac{e}{f} = \frac{1}{6}$
 $\begin{pmatrix} 3 \\ 3 \end{pmatrix} \begin{pmatrix} -2 \\ -2 \end{pmatrix} \begin{pmatrix} 1 \\ 1 \end{pmatrix}$

$$\frac{3a - 2c + e}{3b - 2d + f} = \frac{1}{6}$$

$$\frac{4}{3b - 9} = \frac{1}{6}$$

$$3b - 9 = 24$$

$$3b = 33$$

$$b = 11$$

$$\frac{a}{b} = \frac{1}{6}$$

$$\frac{a}{11} = \frac{1}{6} \Rightarrow a = \frac{11}{6} \text{ bulunur.}$$

Cevap: B

60. $A = \{x / x < 100, x = 2n, n \in \mathbb{Z}^+\}$

$$B = \{x / x < 151, x = 3n, n \in \mathbb{Z}^+\}$$

$$A = \{2, 4, 6, 8, 10, \dots, 98\}$$

$$B = \{3, 6, 9, \dots, 150\}$$

$$S(A \cup B) = S(A) + S(B) - S(A \cap B)$$

$$A \text{ kümesinin eleman sayısı : } \frac{98 - 2}{2} + 1 = 49$$

$$B \text{ kümesinin eleman sayısı : } \frac{150 - 3}{3} + 1 = 50$$

$$A \cap B = \{6, 12, 18, \dots, 96\}$$

$$A \cap B \text{ kümesinin eleman sayısı : } \frac{96 - 6}{6} + 1 = 16$$

$$\begin{aligned} S(A \cup B) &= 49 + 50 - 16 \\ &= 83 \text{ bulunur.} \end{aligned}$$

Cevap: D

61. $x - \frac{1}{y} = 5 \rightarrow x \cdot y - 1 = 5y$

$$y - \frac{1}{x} = 4 \rightarrow x \cdot y - 1 = 4x$$

$$5y = 4x$$

$$\begin{array}{c} \downarrow \quad \downarrow \\ 4k \quad 5k \end{array}$$

$$x = 5k \text{ ve } y = 4k$$

$$\frac{x+y}{x-y} = \frac{5k+4k}{5k-4k} = \frac{9k}{k} = 9 \text{ bulunur.}$$

Cevap: C

$$62. (x^2 - 1) : \frac{1 - \frac{1}{x}}{1 + \frac{1}{x}}$$

$$(x^2 - 1) : \frac{\frac{x-1}{x}}{\frac{x+1}{x}}$$

$$(x^2 - 1) : \frac{(x-1)(x+1)}{x}$$

$$\cancel{(x-1)} \cdot (x+1) \cdot \frac{x+1}{\cancel{(x-1)}} = (x+1)^2 \text{ bulunur.}$$

Cevap: E

$$63. \left(a - \frac{1}{a}\right)^2 = (2\sqrt{15})^2 \quad \left(a + \frac{1}{a}\right)^2 = (x)^2$$

$$a^2 + \frac{1}{a^2} - 2 = 60$$

$$a^2 + \frac{1}{a^2} + 2 = x^2$$

$$a^2 + \frac{1}{a^2} = 62$$

$$62 + 2 = x^2$$

$$64 = x^2$$

$$\boxed{8 = x}$$

bulunur.

Cevap: C

$$64. 2x + 1 \equiv 6 \pmod{7}$$

$$x = 6 \text{ için}$$

$$13 \equiv 6 \pmod{7}$$

Cevap: D

$$65. f\left(1 + \frac{x}{8}\right) = \frac{x}{2} - 1$$

$$f^{-1}\left(\frac{x}{2} - 1\right) = 1 + \frac{x}{8}$$

$$(g \circ f^{-1})(3) = g \circ f^{-1}(3)$$

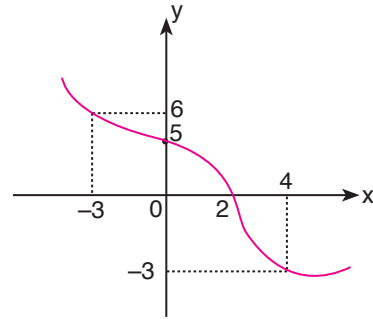
$$x = 8 \text{ için}$$

$$f^{-1}(3) = 1 + \frac{8}{8} = 2$$

$$g(2) = 3x + 1 = 6 + 1 = 7 \text{ bulunur.}$$

Cevap: C

66.



$$f(-3) = 6 \text{ olduğundan } f^{-1}(6) = -3 \text{ tür.}$$

$$f^{-1}(6) = f(x-1) \rightarrow f(x-1) = -3 \text{ için } f(4) = -3 \text{ olmak üzere}$$

$$x-1 = 4 \rightarrow x = 5 \text{ bulunur.}$$

Cevap: A

$$67. x^2 - (2a - b)x - 2a = 0 \text{ denkleminin kökleri } x_1 = a \text{ ve } x_2 = b \text{ olmak üzere;}$$

$$x_1 + x_2 = \frac{-b}{a} \rightarrow a + b = \frac{2a - b}{1} \rightarrow 2b = a \text{ bulunur.}$$

$$x_1 \cdot x_2 = \frac{c}{a} \rightarrow a \cdot b = \frac{-2a}{1} \text{ ise } b = -2 \text{ ve } 2b = a \text{ için}$$

$$a = -4 \text{ bulunur.}$$

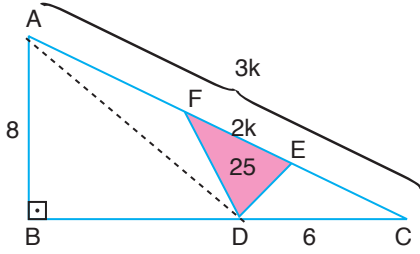
$$a = -4 \text{ ve } b = -2 \text{ için;}$$

$$x^2 + 6x + 8 = 0 \text{ denklemini yazılır.}$$

$$\Delta = b^2 - 4ac = 36 - 4 \cdot 1 \cdot 8 = 36 - 32 = 4 \text{ bulunur.}$$

Cevap: A

74.



$$A(\widehat{ADC}) = \frac{8 \cdot 6}{2} = 24$$

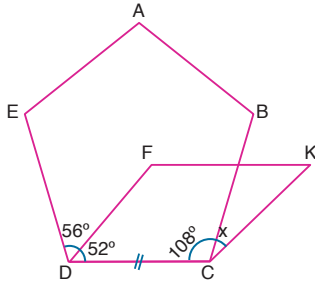
$$3S = 24 \quad S = 8$$

$$2S = A(FDE)$$

$$2 \cdot 8 = 16$$

Cevap: A

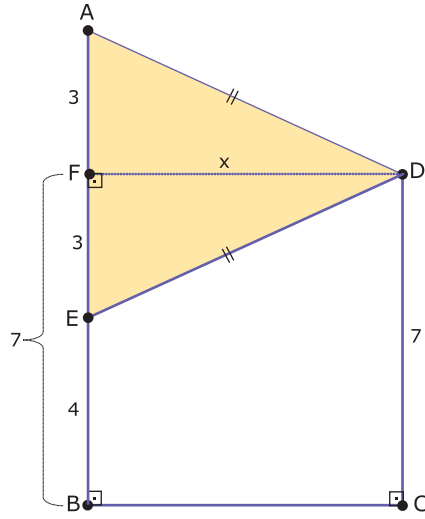
75.



- ABCDE düzgün beşgen olduğundan
 $m(\widehat{EDC}) = 108^\circ$
- $m(\widehat{EDC}) = m(\widehat{EDF}) + m(\widehat{FDC})$
 $108^\circ = 56^\circ + m(\widehat{FDC})$
 $m(\widehat{FDC}) = 52^\circ$ olur.
- FKCD paralel kenar olduğundan,
 $m(\widehat{FDC}) + m(\widehat{DCK}) = 180^\circ$
 $52^\circ + 108^\circ + x = 180^\circ$
 $160^\circ + x = 180^\circ$
 $x = 20^\circ$ olur.

Cevap: A

76.



[DF] dik doğru parçası çizilirse, DAE ikizkenar üçgenine ait yükseklik belirlenir.

Böylece $|FE| = |AF| = 3$ cm olur.

$|FD| = x$ olsun.

ADE alanı 48 cm^2 olduğundan

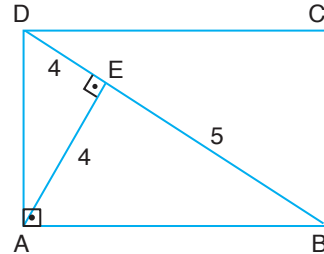
$$48 = \frac{6 \cdot x}{2} \text{ cm} \Rightarrow x = 16 \text{ cm dir.}$$

BEDC yamuğunun alanı

$$\frac{(4 + 7) \cdot 16}{2} = 11 \cdot 8 = 88 \text{ cm}^2 \text{ bulunur.}$$

Cevap: E

77.



$$h^2 = 4.5$$

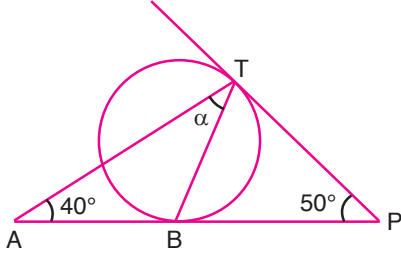
$$h = 2\sqrt{5}$$

$$A(ABD) = \frac{2\sqrt{5} \cdot 9}{2} = 9\sqrt{5}$$

$$A(ABCD) = 2 \cdot 9\sqrt{5} = 18\sqrt{5}$$

Cevap: A

78.



$(\widehat{APT})$ üçgeninde $m(\widehat{ATP}) = 90^\circ$ dir.

Bu nedenle $m(\widehat{CTB}) = 180^\circ$ dir.

Çevre açıdan $m(\widehat{CB}) = 2\alpha$ 'dır.

$$m(\widehat{TB}) + 50^\circ = 180^\circ$$

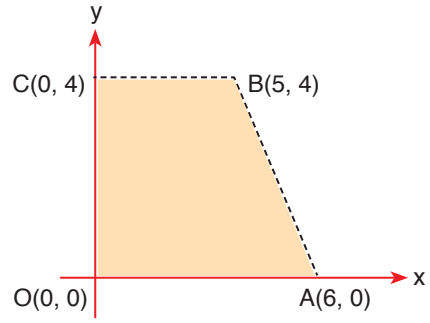
$$m(\widehat{TB}) = 130^\circ$$

$$130^\circ + 2\alpha = 180^\circ \rightarrow 2\alpha = 50^\circ$$

$$\alpha = 25^\circ$$

Cevap: C

80.

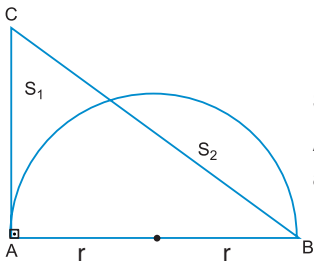


$$\text{Yamuk Alanı} = \frac{(\text{Alt taban} + \text{Üst taban})}{2} \cdot \text{Yükseklik}$$

$$A = \frac{(6+5)}{2} \cdot 4 = 22$$

Cevap: B

79.



$|AB| = 2r$ olsun.

$S_1 = S_2$ olduğundan

$A(ABC) = \text{yarım dairenin alanı}$

$$\frac{6 \cdot 2r}{2} = \frac{\pi r^2}{2} \Rightarrow r = \frac{12}{\pi}$$

$$|AB| = 2r = 2 \cdot \frac{12}{\pi} = \frac{24}{\pi}$$

Cevap: A