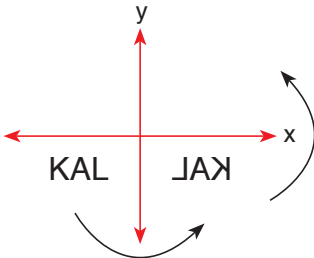
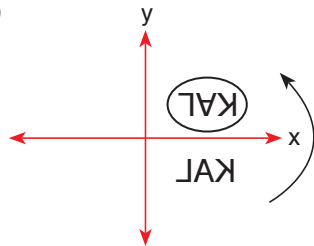



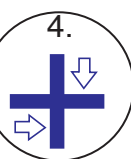


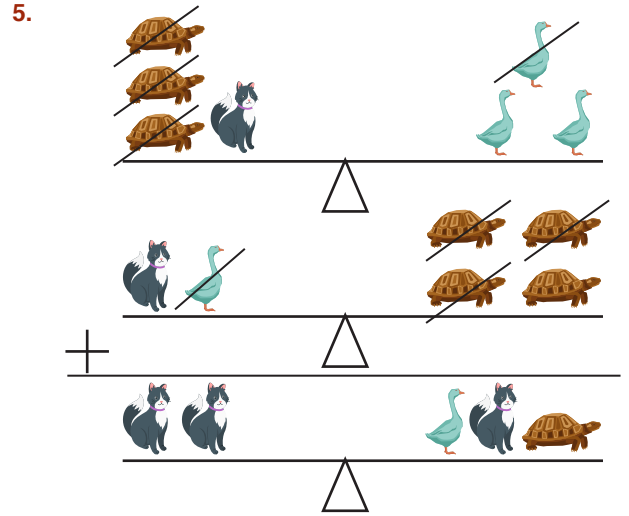
Bu testte cevaplayacağınız toplam soru sayısı 80'dir.

1. $4^1 = 4$
 $4^2 = 4 \omega 4 = 5$
 $4^3 = 5 \omega 4 = 3$
 $4^4 = 3 \omega 4 = 4$
 $4^5 = 4 \omega 4 = 5$
 $4^{41} = (4^4)^{10} \omega 4 = 4 \omega 4 = 5$

2. i) 
- ii) 

3. 1.  2.  3.  4. 

4. Son satırı

Cevap: C

Cevap: C

Cevap: C

Cevap: C

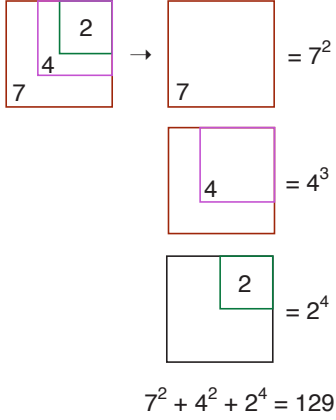
Cevap: E

6. Önce ● yapılır.
 TMXRCK, sonra ▲ yapılır.
 KMCRXT olur.

Cevap: E

7.
$$\begin{array}{r} 2x - y + 4z = 33 \\ -2/3z + 2x + y = 24 \\ \hline 4y + 3z + 3x = 28 \\ 2x - y + 4z = 33 \\ -6z - 4x - 2y = -48 \\ + 4y + 3z + 3x = 28 \\ \hline x + y + z = 13 \end{array}$$

Cevap: E

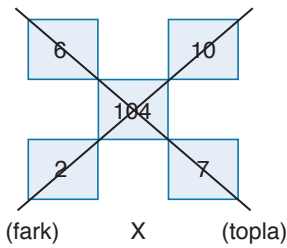
8. 

$$7^2 + 4^2 + 2^2 = 129$$

9.

8 br	11 kg
4 br	?

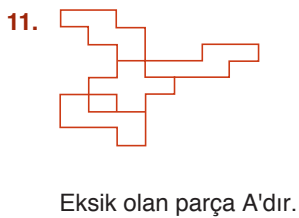
? = 22 kg olmalı.
? + 15 = 22 ⇒ ? = 7

10. 

(fark) X (topla)

$$(10 - 2) \times (6 + 7) = 140$$

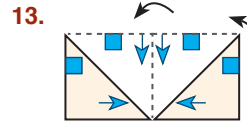
$$(10 - 2) \times (17 + 5) = 8 \cdot 22 = 176$$



12. Tuğlalar sayıldığında 40 çıkar.

Cevap: E

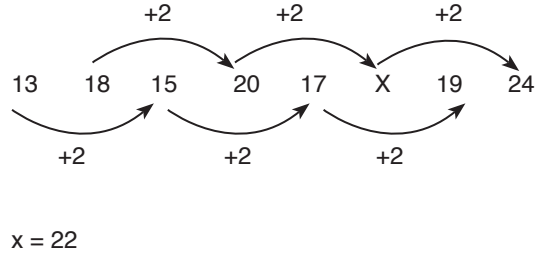
Cevap: D



Cevap: C

Cevap: E

TASARI EĞİTİM YAYINLARI

14. 

x = 22

Cevap: D

Cevap: C

15. Küpü kapatırsak

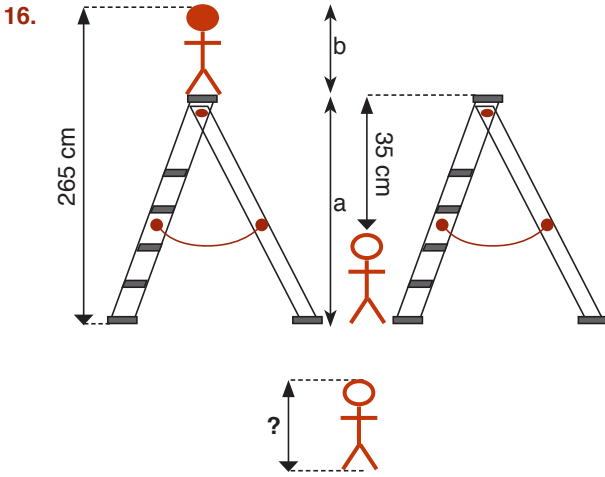
$$6 \rightarrow 1$$

$$3 \rightarrow 2$$

$$5 \rightarrow 4 \quad \text{karşılıklı gelen yüzler bunlar olmalı.}$$

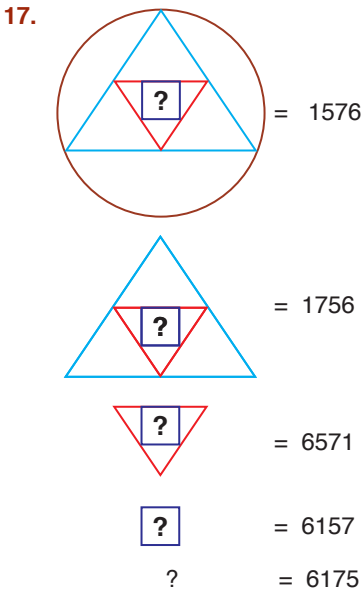
Cevap: A

Cevap: A

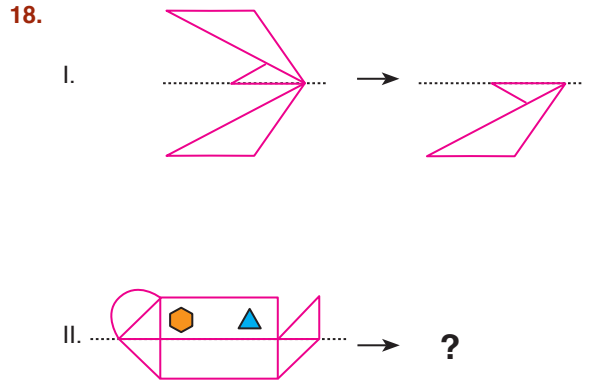


$$\begin{array}{r} a + b = 265 \\ - a - b = 35 \\ \hline 2b = 230 \\ b = 115 \end{array}$$

Cevap: D



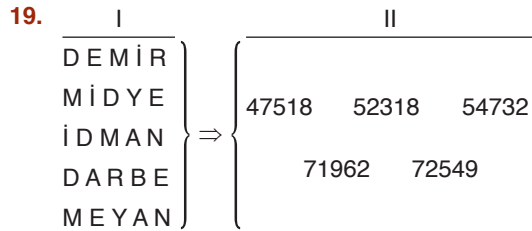
Cevap: C



Üstteki şekil alttaki şeklin üzerine simetri şekilde yerleştirmekte.



Cevap: E



Harflerde sağda bir tane R var. Buradan R = 9 olur.
DEMİR = 72549

D = 7, E = 2, M = 5, İ = 4, Y = 3, A = 1, N = 8, B = 6
MİDYE → 54732
İDMAN → 47518
DARBE → 71962
MEYAN → 52318

Cevap: A

20.
$$\left. \begin{array}{l} \text{I} \\ \text{AYAR} \\ \text{ALAR} \\ \text{EYER} \\ \text{ELEK} \\ \text{EREK} \end{array} \right\} \Rightarrow \left\{ \begin{array}{l} \text{II} \\ 1314 \quad 1516 \quad 1614 \\ 2326 \quad 2526 \end{array} \right.$$

Harflerde solda 3 adet E var $E = 1$
 2 adet A var $A = 2$ olur.
 Sağda 3 adet R var $R = 6$
 2 adet K var $K = 4$
 $E R E K \rightarrow 1614$
 O halde $E L E K \rightarrow 1314$ bulunur.

Cevap: A

21.

x	a	b	c
a			48
b			
c		80	

+	a	b	c
a			
b	8		
c			

(x) tablosundan

$a \cdot c = 48$

$+ \quad c \cdot b = 80$

$c(a + b) = 128$

8


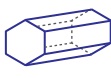
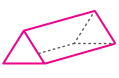
c = 16 bulunur.



(+) tablosundan

$a + b = 8$

Cevap: D

22.

				
I	1	0	0	I = □
II	0	6	3	II = ?
III	8	0	2	III = ?
IV	0	2	0	IV = ?

1. şekilden 8 tane  ve 1 tane  olduğu anlaşılır.

$I \rightarrow \square$ ve $III \rightarrow \triangle$

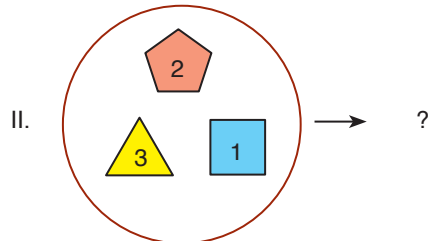
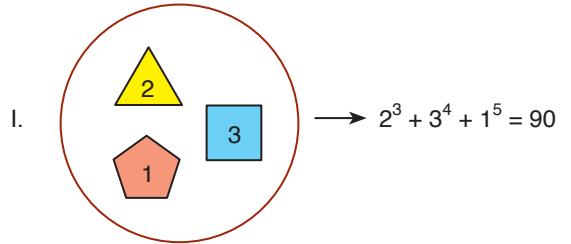
2. şekilde 6 tane  ve 2 tane  olduğu anlaşılır.

$II \rightarrow \square$ ve $IV \rightarrow \hexagon$ bulunur.

Cevap: E

TASARI EĞİTİM YAYINLARI

23.

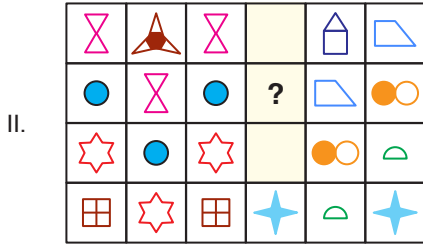
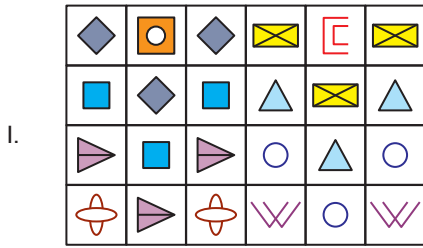


Şeklin içindeki sayıya kenar sayısı kuvvet olmakta

$II \rightarrow 2^5 + 3^3 + 1^4 = 32 + 27 + 1 = 60$

Cevap: C

29.



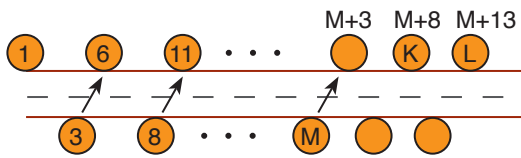
1. sütun = 3. sütun
4. sütun = 6. sütun
O halde buradan



olmalı.

Cevap: D

30.



- Üst bant alttakinden 3 fazla
- Ardışık dizi artışında ise 5 fazlalık bulunmakta

$$K + L + M = 120$$

$$M + M + 8 + M + 13 = 120$$

$$3M + 21 = 120$$

$$3M = 99$$

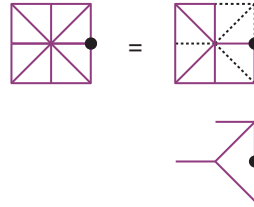
$$M = 33$$

O halde; $K = M + 8$

$$K = 33 + 8 = 41 \text{ bulunur.}$$

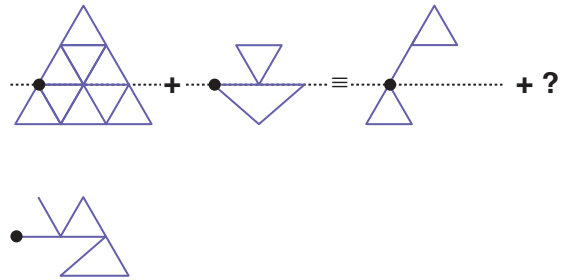
Cevap: C

31. İki şeklin birleşimi



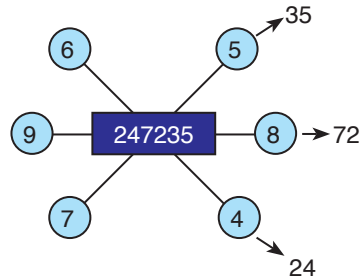
Cevap: B

32.

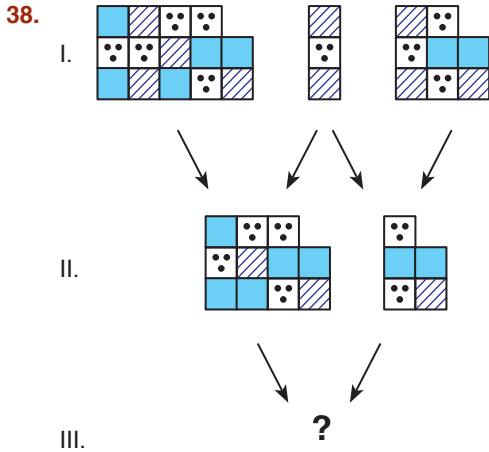


Cevap: A

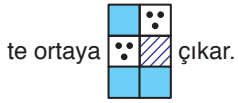
33.



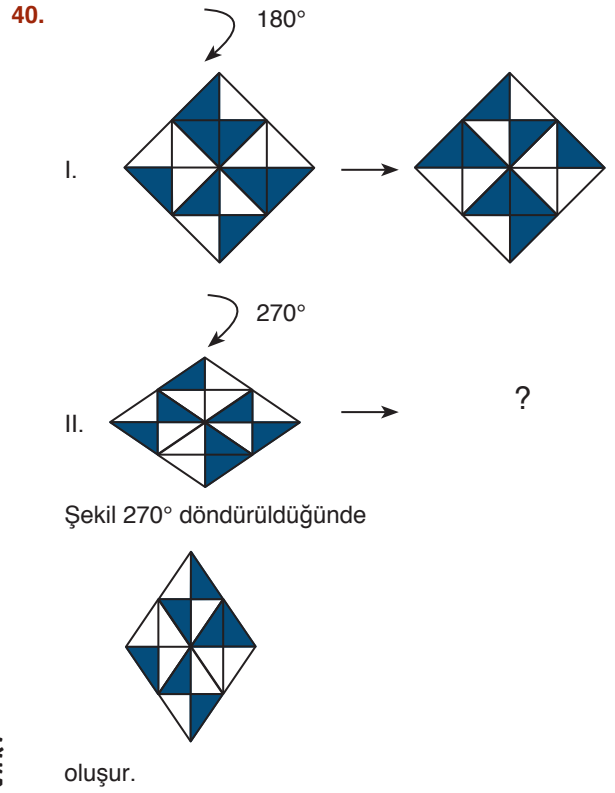
Cevap: A



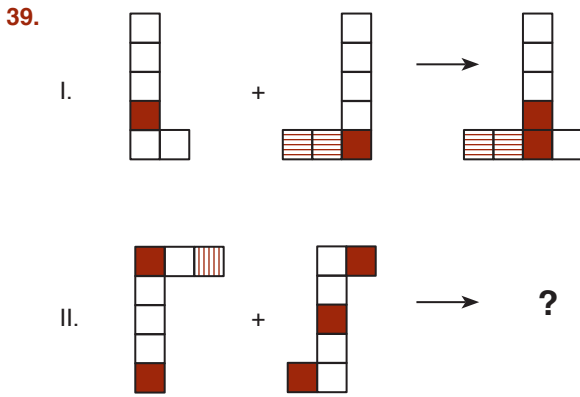
Orta şekildeki görüntü sağ ve soldan silinmekte II. aşamada ise sol ve sağdaki aynı görüntü silinmekte ortaya



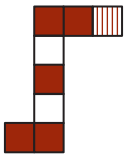
Cevap: A



Cevap: D



İki şekil birleştirilmekte. Sağ şekil + sol şekil şeklinde



Cevap: D

41.
$$\frac{2,4}{0,08} + \frac{0,21}{0,07} + \frac{5}{0,5}$$

$$= \frac{240}{8} + \frac{21}{7} + \frac{50}{5}$$

$$= 30 + 3 + 10$$

$$= 43 \text{ bulunur.}$$

Cevap: D

42.
$$\frac{a^{m+2} \cdot a^{n-1}}{a^{m+n}} = \frac{a^m \cdot a^2 \cdot a^n \cdot a^{-1}}{a^{m+n}}$$

$$= \frac{a^{m+n} \cdot a}{a^{m+n}} = a \text{ bulunur.}$$

Cevap: A

$$43. \frac{\left(\frac{1}{3}-2\right)+\left(\frac{1}{2}-3\right)}{\left(2-\frac{3}{4}\right)\cdot\left(\frac{3}{2}-4\right)} = \frac{\left(\frac{-5}{3}\right)+\left(\frac{-5}{2}\right)}{\left(\frac{5}{4}\right)\cdot\left(\frac{-5}{2}\right)}$$

$$= \frac{-10-15}{\frac{6}{-25}} = \frac{-25}{6} \cdot \frac{8}{-25} = \frac{4}{3} \text{ bulunur.}$$

Cevap: D

$$44. 2^x = a$$

$$2^{2(x+2)} = 2^{2x \cdot 22} = 2^{4a}$$

Cevap: E

$$45. \frac{(\sqrt{8}-\sqrt{2})\cdot(\sqrt{18}+\sqrt{2})}{(3\sqrt{2}-\sqrt{8})+(\sqrt{8}-\sqrt{2})}$$

$$= \frac{(2\sqrt{2}-\sqrt{2})\cdot(3\sqrt{2}+\sqrt{2})}{(3\sqrt{2}-2\sqrt{2})+(2\sqrt{2}-\sqrt{2})}$$

$$= \frac{\sqrt{2}\cdot 4\sqrt{2}}{\sqrt{2}+\sqrt{2}} = \frac{8}{2\sqrt{2}} = \frac{4}{\sqrt{2}}$$

$$= \frac{4\sqrt{2}}{2}$$

$$= 2\sqrt{2}$$

Cevap: D

$$46. \sqrt[3]{\frac{54}{1,6 \cdot 10^{-2}}} = \sqrt[3]{\frac{54}{16 \cdot 10^{-3}}}$$

$$= \sqrt[3]{\frac{27 \cdot 10^3}{8}}$$

$$= \sqrt[3]{\frac{3^3 \cdot 10^3}{2^3}}$$

$$= \frac{3 \cdot 10}{2} = \frac{30}{2} = 15 \text{ bulunur.}$$

Cevap: E

$$47. \frac{n!(n+1)!}{(n-1)!(n+2)!}$$

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

$$= \frac{n}{n+2} \text{ bulunur.}$$

Cevap: D

$$48. \frac{(3n)!(n-3)!}{(3n-1)!(n-2)!}$$

$$= \frac{\cancel{(3n-1)!} \cdot 3n \cdot \cancel{(n-3)!}}{\cancel{(3n-1)!} \cdot \cancel{(n-3)!} \cdot (n-2)} = \frac{3n}{n-2}$$

Cevap: B

$$49. \begin{array}{r} k + 2l + m = 6 \\ 2l - 2k - l + 2m = 7 \\ \hline k + 2l + m = 6 \\ + 4k - 2l + 4m = 14 \\ \hline 5k + 5m = 20 \\ 5(k + m) = 20 \Rightarrow k + m = 4 \end{array}$$

I. denklemde yerine yazdığımızda

$$4 + 2l = 6 \Rightarrow 2l = 2$$

$$l = 1$$

O halde $k + l + m = 4 + 1 = 5$ bulunur.

Cevap: E

$$50. \begin{array}{r} 2x + y = z \\ x + z = 3y \\ 2x + y + x = 3y \\ 3x = 2y \Rightarrow x = 2k \text{ ve } y = 3k \\ 2 \cdot 2k + 3k = z \Rightarrow z = 7k \\ x + y + z = 12 \\ 2k + 3k + 7k = 12 \\ 12k = 12 \Rightarrow k = 1 \\ z = 7k \Rightarrow z = 7 \text{ bulunur.} \end{array}$$

Cevap: E

$$51. \frac{a+1}{a} = x \Rightarrow 1 + \frac{1}{a} = x \Rightarrow \frac{1}{a} = x - 1$$

$$\frac{b-1}{b} = y \Rightarrow 1 - \frac{1}{b} = y \Rightarrow \frac{1}{b} = 1 - y$$

$$\frac{1}{a} + \frac{1}{b} = x - 1 + 1 - y = x - y$$

Cevap: C

$$52. \frac{1-2x^3}{x^m} + \frac{2-3x}{x^{m-3}} + \frac{3}{x^{m-4}}$$

$$= \frac{1-2x^3 + (2-3x)x^3 + 3x^4}{x^m}$$

$$= \frac{1-2x^3 + 2x^3 - 3x^4 + 3x^4}{x^m}$$

$$= \frac{1}{x^m} \text{ bulunur.}$$

Cevap: A

$$53. \frac{x-y}{x+y} \cdot \frac{4x+2y}{2x^2-xy-y^2}$$

$$= \frac{\cancel{x-y}}{x+y} \cdot \frac{2(2x+y)}{(2x+y)(x-y)}$$

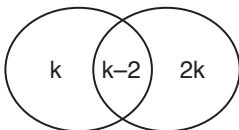
$$= \frac{2}{x+y}$$

$$54. n(A \cap B) = k - 2$$

$$n[A - (A \cap B)] = k$$

$$n[B - (A \cap B)] = 2k$$

$$n(A \cup B) = 54$$



$$n(A) = 2k - 2$$

$$= 28 - 2 = 26 \text{ bulunur.}$$

Cevap: B

$$55. A = \{x \mid 0 < x \leq 10; x \in \mathbb{Z}^+\}$$

$$B = \{y \mid y = 2k; 0 < k \leq 10; x \in \mathbb{Z}^+\}$$

$$A = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

$$B = \{2, 4, 6, 8, 10\}$$

$$(A \cap B) = \{2, 4, 6, 8, 10\}$$

$$n(A \cap B) = 5 \text{ bulunur.}$$

Cevap: B

$$56. |x^2 - 4x + 4| = 25 \Rightarrow |(x-2)^2| = 25$$

$$|x-2|^2 = 25$$

$$i) |x-2| = 5 \text{ veya } |x-2| = -5 \text{ olamaz}$$

$$x-2 = 5 \text{ ve } x-2 = -5$$

$$x = 7 \quad x = -3$$

$$\Sigma x = 7 - 5 = 4$$

Cevap: C

Cevap: C

$$57. \begin{cases} a \cdot b = 3 \\ b \cdot c = \frac{2}{3} \\ a \cdot c = \frac{4}{3} \end{cases} \Rightarrow \frac{a \cdot b}{b \cdot c} = \frac{3}{\frac{2}{3}} = \frac{9}{2}$$

$$\frac{a}{c} = \frac{9}{2}$$

$$\frac{b \cdot c}{a \cdot c} = \frac{\frac{2}{3}}{\frac{4}{3}} \Rightarrow \frac{b}{a} = \frac{1}{2}$$

$$\frac{a}{c} = \frac{9 \cdot 2k}{2 \cdot 2k} \quad \frac{b}{a} = \frac{1 \cdot 9k}{2 \cdot 9k} \quad (k \in \mathbb{Z}^+)$$

$$\frac{a}{c} = \frac{18k}{4k} \quad \frac{b}{a} = \frac{9k}{18k}$$

$$a = 18k, \quad b = 9k, \quad c = 4k$$

$$a > b > c \text{ bulunur.}$$

Cevap: A

58. $a + b = 2$

$$b + c = \frac{5}{4}$$

$$a + c = \frac{9}{4}$$

$$2(a + b + c) = 2 + \frac{5}{4} + \frac{9}{4}$$

• $a + b + c = \frac{22}{8}$ bulunur.

$$2 + c = \frac{22}{8} \Rightarrow c = \frac{22}{8} - 2$$

$$c = \frac{6}{8} = \frac{3}{4}$$

• $a + \frac{5}{4} = \frac{22}{8}$

$$a = \frac{22}{8} - \frac{5}{4} = \frac{12}{8} = \frac{3}{2}$$

$$\frac{c}{a} = \frac{\frac{3}{4}}{\frac{3}{2}} = \frac{1}{2} \text{ bulunur.}$$

Cevap: E

59. $\frac{1}{3^x + 1} + \frac{8}{9^x - 1} = \frac{1}{5}$

$$\frac{3^x - 1 + 8}{9^x - 1} = \frac{1}{5}$$

$$5 \cdot 3^x + 35 = 9^x - 1 \quad (3^x = a \text{ olsun})$$

$$5a + 35 = a^2 - 1$$

$$a^2 - 5a - 36 = 0$$

$$(a + 4)(a - 9) = 0$$

$a = -4$ ve $a = 9$ olur.

$$3^x = 9 \Rightarrow 3^x = 3^2$$

$$x = 2 \text{ bulunur.}$$

Cevap: C

60. • $\frac{a+b}{2} = 1 \Rightarrow a + b = 2 \Rightarrow \boxed{b = 2 - a}$

• $a - c = -2 \Rightarrow a - c = -2 \Rightarrow \boxed{c = a + 2}$

• $(\sqrt{b \cdot c} = 2)^2 \Rightarrow b \cdot c = 4$

$$(2 - a)(2 + a) = 4$$

$$4 - a^2 = 4$$

$$a^2 = 0$$

$$a = 0$$

Cevap: B

61. $3^a \cdot 4^{-b} = 4$

$$x \quad 3^{-b} \cdot 4^a = 36$$

$$3^{a-b} \cdot 4^{a-b} = 144$$

$$(3 \cdot 4)^{a-b} = 12^2$$

$$12^{a-b} = 12^2 \Rightarrow a - b = 2$$

Cevap: D

62. $\frac{x^3}{x^2} + \frac{2}{x^2} = \frac{3x^2}{x^2}$

$$3/x + \frac{2}{x^2} = 3$$

$$3x + \frac{6}{x^2} = 9$$

Cevap: B

63. $x^2 + y^2 - 2xy - 4 = 0$

$$\downarrow$$

$$(x - y)^2 - 2^2 = 0$$

$$(x - y - 2)(x - y + 2) = 0$$

$$x - y = 2 \quad x - y = -2$$

$$\Rightarrow |x - y| = 2 \text{ olur.}$$

Cevap: D

$$64. \underbrace{\sqrt{-x+2\sqrt{x-1}}}_0 + \underbrace{\sqrt{y-\sqrt{2y-1}}}_0 = 0$$

$$\Rightarrow -x+2\sqrt{x-1} = 0 \Rightarrow (2\sqrt{x-1} = x)^2$$

$$4(x-1) = x^2$$

$$4x-4 = x^2$$

$$x^2-4x+4 = 0$$

$$(x-2)^2 = 0$$

$$x = 2$$

$$\Rightarrow y - \sqrt{2y-1} = 0 \Rightarrow (y = \sqrt{2y-1})^2$$

$$y^2 = 2y - 1$$

$$y^2 - 2y + 1 = 0$$

$$(y-1)^2 = 0 \Rightarrow y = 1$$

$$\Rightarrow x + y = 2 + 1 = 3$$

Cevap: B

$$65. 5 + 10 + 15 + \dots + 40 - 4 - 8 - 12 - \dots - 32$$

$$= 5(1 + 2 + 3 + \dots + 8) - 4(1 + 2 + 3 + \dots + 8)$$

$$= (1 + 2 + 3 + \dots + 8)(5 - 4)$$

$$= 1 + 2 + 3 + \dots + 8$$

$$= \frac{8 \cdot 9}{2} = 36$$

Cevap: C

$$66. (35)_{10} = (x)_8$$

$$\begin{array}{r} 35 \quad | \quad 8 \\ - 32 \quad | \quad 4 \\ \hline \quad \quad | \quad 3 \end{array} \Rightarrow = 43$$

Cevap: D

$$67. f(x) = x + 1 \text{ ve } g(x) = x^2 - 1$$

- $(g \circ f)(a) = g(f(a)) = g(a + 1) = (a + 1)^2 - 1 = 35$
- $(a + 1)^2 = 36$
- $a + 1 = 6 \quad a + 1 = -6$
- $a = 5 \quad a = -7$

Cevap: D

$$68. f^{-1}(0) = a \Rightarrow f(a) = 0$$

$$\Rightarrow f(a) = \frac{(a-3)^3}{4} = 0$$

$$(a-3)^3 = 0$$

$$a-3 = 0$$

$$a = 3 \text{ olur.}$$

Cevap: C

$$69. f(x) = ax + b$$

$$f(1) = a + b = -2$$

$$f(2) = 2a + b = 1$$

$$\begin{array}{r} -/ \quad a + b = -2 \\ + \quad 2a + b = 1 \\ \hline \quad \quad a = 3 \end{array} \rightarrow \begin{array}{r} 6 + b = 1 \\ \quad \quad b = -5 \end{array}$$

$$\Rightarrow f(x) = 3x - 5$$

$$f(3) = 3 \cdot 3 - 5 = 4 \text{ olur.}$$

Cevap: D

$$70. 2x^2 - (m-1)x - (4-m) = 0$$

- $x_1 = \frac{1}{x_2} \Rightarrow x_1 \cdot x_2 = 1$
- $x_1 \cdot x_2 = 1$
- $\frac{-(4-m)}{2} = 1 \Rightarrow -4 + m = 2$
- $m = 6$

Cevap: E

$$71. a(x+1)^2 - x + 1 = 8$$

$$a(x^2 + 2x + 1) - x + 1 - 8 = 0$$

$$ax^2 + 2ax + a - x - 7 = 0$$

$$ax^2 + (2a-1)x + a - 7 = 0$$

$$x_1 \cdot x_2 = \frac{a-7}{a} \times \frac{-2}{5}$$

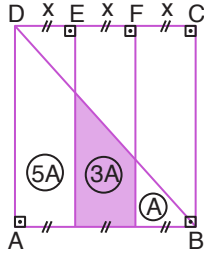
$$5a - 35 = -2a$$

$$7a = 35$$

$$a = 5$$

Cevap: D

76.



$$\text{Alan}(DAB) = \frac{A(ABCD)}{2}$$

$$9A = \frac{A(ABCD)}{2} \rightarrow A(ABCD) = 18A = (3x)^2$$

$$18A = 9x^2$$

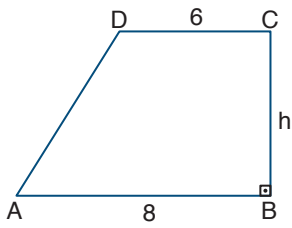
$$\frac{x^2}{2} = A$$

$$\Rightarrow 3A = 3 \cdot \frac{x^2}{2} = \frac{3x^2}{2}$$

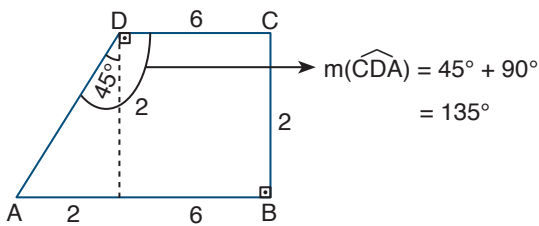
$$k = \frac{3}{2}$$

Cevap: B

77.



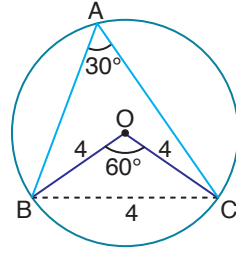
$$14 = \frac{6+8}{2} \cdot h \Rightarrow h = 2$$



$$m(\widehat{CDA}) = 45^\circ + 90^\circ = 135^\circ$$

Cevap: D

78.



$$m(\widehat{BAC}) = \frac{m(\widehat{BOC})}{2}$$

$$\Rightarrow 30^\circ = \frac{m(\widehat{BOC})}{2}$$

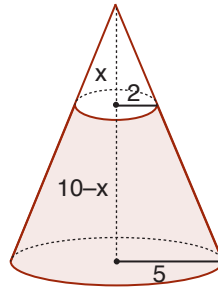
$$m(\widehat{BOC}) = 60^\circ$$

$$|OB| = |OC| \text{ ve } m(\widehat{BOC}) = 60^\circ$$

$$\Rightarrow |OB| = |OC| = |BC| = 4 \text{ cm olur.}$$

Cevap: C

79.



$$\rightarrow \frac{x}{10} = \frac{2}{5}$$

$$5x = 20$$

$$x = 4$$

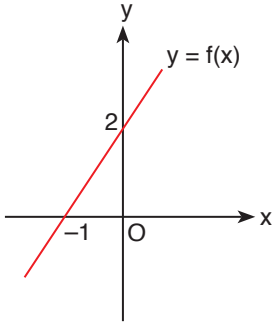
$$V = \frac{1}{3}\pi \cdot 5^2 \cdot 10 - \frac{1}{3}\pi \cdot 2^2 \cdot 4$$

$$V = \frac{1}{3}\pi(250 - 16)$$

$$V = \frac{1}{3}\pi \cdot 234 = 78\pi$$

Cevap: E

80.



$$\frac{x}{-1} + \frac{f(x)}{2} = 1$$

$$-2x + f(x) = 2$$

$$f(x) = 2 + 2x$$

Cevap: A