

## ÇÖZÜMLER

1. ▲ → (1. ve 2. sütun çarpılıyor.)

(1. ve 2. sütun toplanıyor.)

● → (1. sütunun 2 katı ile 2. sütun toplanıyor.)

(2. sütunun 2 katı ile 1. sütun toplanıyor.)

A = 7      B = 4      C = 10 ve D = 38

7	4	→	28	11	→	67	50
4	5	▲	20	9	●	49	38
3	7		21	10		52	41

$$A + B + C + D = 7 + 4 + 10 + 38$$

$$= 59$$

Cevap: C

2.



C seçeneği hariç diğerleri döndürmeyle aynı şekli vermekte.

Cevap: C

3. ▲ tablosunda kesişim değerlerinin toplamının "3" katı

$$3 \cdot (5 + 7) = 36$$

$$3 \cdot (5 + 3) = 24$$

$$3 \cdot (9 + 7) = 48$$

$$3 \cdot (9 + 3) = 36 = A$$

\* Tablosunda kesişim değerlerinin çarpımının yarısı

$$\frac{6 \cdot 4}{2} = 12, \frac{6 \cdot 8}{2} = 24 = B$$

$$\frac{11 \cdot 4}{2} = 22, \frac{11 \cdot 8}{2} = 44$$

O halde

$$\frac{A}{B} = \frac{36}{24} = \frac{3}{2} \text{ bulunur.}$$

Cevap: B

4.

$$11 \rightarrow 8 \rightarrow 5 \rightarrow 2 \rightarrow -1 \rightarrow -4 \rightarrow \dots \rightarrow -20 \rightarrow \dots \rightarrow -49 \rightarrow \dots \rightarrow$$

Bu dizide şu şekilde bir denklem oluşturulur.

$$-3x + 11$$

$$\textcircled{1} \rightarrow -3 \cdot 1 + 11 = 8$$

$$\textcircled{2} \rightarrow -3 \cdot 2 + 11 = 5$$

⋮

$$\textcircled{20} \rightarrow -3 \cdot 20 + 11 = -49$$

$$\textcircled{21} \rightarrow -3 \cdot 21 + 11 = -52 = A$$

⋮

$$\textcircled{40} \rightarrow -3 \cdot 40 + 11 = -109 = B$$

$$A - B = -52 - (-109)$$

$$= -52 + 109$$

$$= 57 \text{ bulunur.}$$

Cevap: C

5.

$$\triangle = 5, \bullet = 2, \diamond = 4, * = 3$$

5	2	4	5	3	19
4	3	2	4	5	18
2	3	5	3	2	15
3	4	2	5	5	19
2	5	3	3	4	17
16	17	16	20	19	

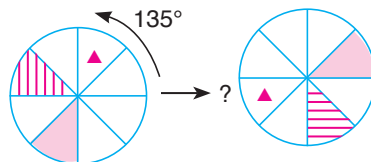
$$A = 15 \text{ ve } B = 20$$

$$A + B = 35 \text{ bulunur.}$$

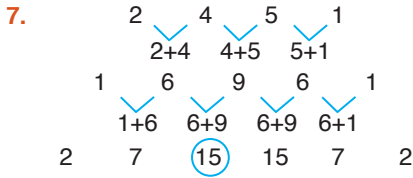
Cevap: D

6.

Her bir dilim  $45^\circ$  olduğunda üç dilim ilerlemesi anlamına gelir.

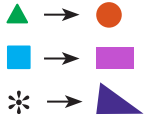


Cevap: D



Cevap: D

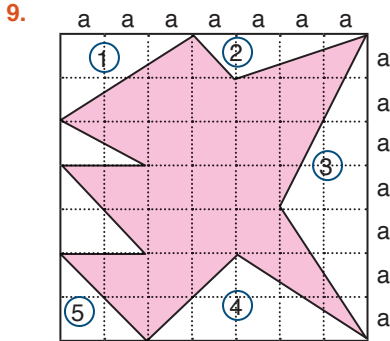
8. Şekillerden karşılıklı gelenler aşağıdaki gibi



O halde küplerde görünen yüzeylerde karşılıklı gelen şekiller bulunamaz.



Cevap: D



Şeklin tamamının alanı =  $7a \cdot 7a = 49a^2$

Şimdi taralı olmayan bölgelerin alanlarını bulalım.

$$\textcircled{1} \rightarrow \frac{3a \cdot 2a}{2} = 3a^2 \quad \textcircled{2} \rightarrow \frac{4a \cdot a}{2} = 2a^2$$

$$\textcircled{3} \rightarrow \frac{7a \cdot 2a}{2} = 7a^2 \quad \textcircled{4} \rightarrow \frac{5a \cdot 2a}{2} = 5a^2$$

$$\textcircled{5} \rightarrow \frac{3a \cdot 2a}{2} = 3a^2 \quad \textcircled{6} \rightarrow \frac{2a \cdot 2a}{2} = 2a^2$$

$$\text{O halde Taralı alan} = (\text{Tüm şekil}) - (\text{Taralı olmayan}) \\ = 49a^2 - (3a^2 + 2a^2 + 7a^2 + 5a^2 + 3a^2 + 2a^2) = 27a^2$$

Cevap: B

10. A

Yıldız etrafındaki sayılar toplamı yıldızın uç sayısına bölünüyor.

$$\frac{32 + 19 + 28 + 15 + 11}{5} = \frac{105}{5} = 21$$

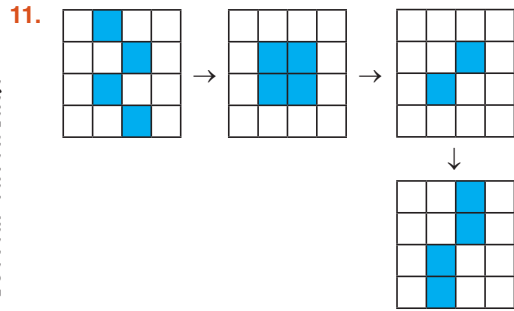
B

$$\frac{27 + 35 + 32 + 18}{4} = 28$$

C

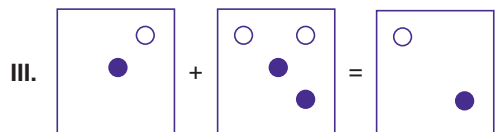
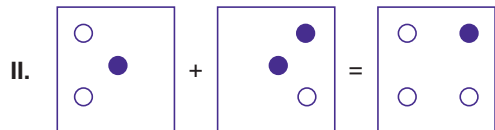
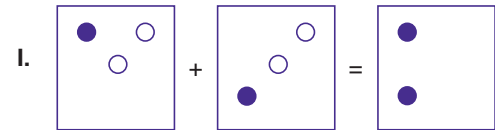
$$\frac{41 + 14 + 10}{3} = 25$$

Cevap: E



Cevap: B

12.



Cevap: C

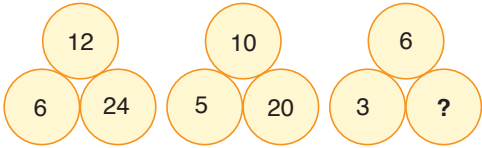
13. HASANPASHASANPASHAS ...

$$\begin{array}{r} \overbrace{170}^8 \quad \overbrace{16}^8 \\ \underline{-16} \quad \underline{-21} \\ 10 \\ \underline{-8} \\ 2 \end{array}$$

HASANPASHASANPASHAS ...  
1 2 3 4 5 6 7 8

Cevap: B

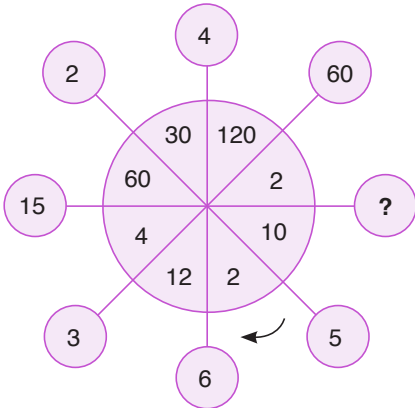
14.



$$\left. \begin{array}{l} \frac{24}{12} = 2 \quad \frac{20}{10} = 2 \quad \frac{?}{6} = 2 \\ 6 \cdot 2 = 12 \quad 5 \cdot 2 = 10 \quad 3 \cdot 2 = 6 \end{array} \right\} \Rightarrow ? = 12$$

Cevap: D

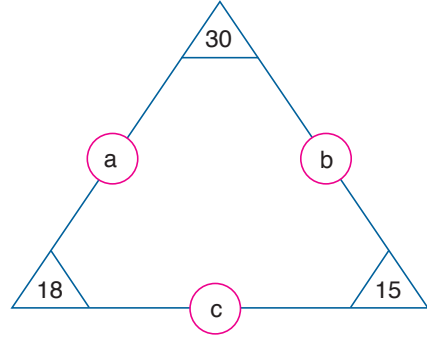
15.



$$\begin{array}{l} 6 \cdot 2 = 12 \\ 12 \div 3 = 4 \\ 4 \cdot 15 = 60 \\ 60 \div 2 = 30 \\ 30 \cdot 4 = 120 \\ 120 \div 60 = 2 \\ 2 \cdot ? = 10 \Rightarrow ? = 5 \end{array}$$

Cevap: A

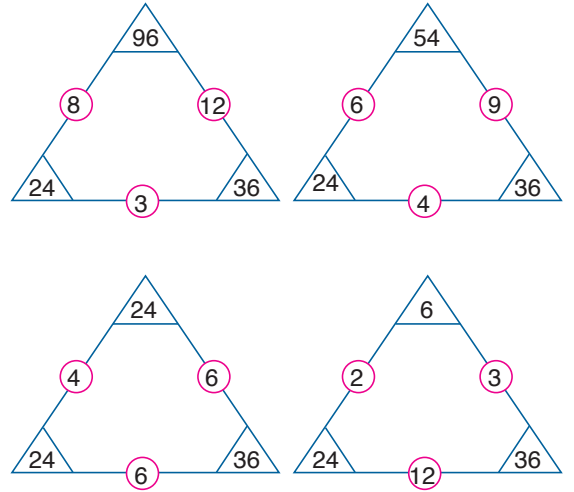
16.



$$\Rightarrow 6 + 5 + 3 = 14$$

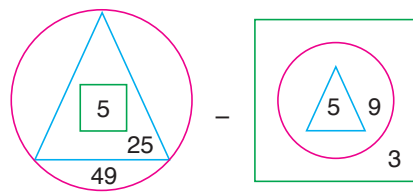
Cevap: E

17.



Cevap: B

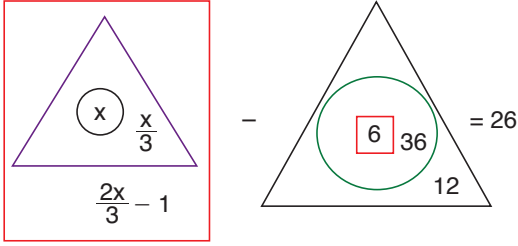
18.



$$\frac{49}{3} - 9 = \frac{22}{3}$$

Cevap: D

19.



$$\left(\frac{2x}{3} - 1\right)^2 - 23 = 26$$

$$\left(\frac{2x}{3} - 1\right)^2 = 49$$

$$\frac{2x}{3} - 1 = 7$$

$$\frac{2x}{3} = 8 \Rightarrow x = 12$$

Cevap: E

$$20. f(7B) = 40 \Rightarrow 7B - 7.B = 40$$

$$70 + B - 7B = 40$$

$$-6B = -30$$

$$B = 5$$

Cevap: A

$$21. f(AB) = 82$$

$$\Rightarrow AB - A.B = 82$$

$$\Rightarrow 10A + B - A.B = 82$$

$$\Rightarrow A = 9, B = 1$$

$$\Rightarrow 9 + 1 = 10$$

Cevap: B

22.

+	a	b	c
a	b	18	
b		c	
c			

$$a + a = b, a + b = 18$$

$$\Rightarrow 3a = 18$$

$$a = 6 \Rightarrow b = 12 \Rightarrow c = 24$$

$$a.c = 6.24 = 144$$

Cevap: C

23.

+	a	b	c
a			10
b			
c		11	

$$a + c = 10$$

$$b + c = 11$$

$$b + c = 11 \Rightarrow b = 5$$

$$c = 6$$

$$a = 4$$

x	a	b	c
a		20	
b			
c	24		

$$a.c = 24$$

$$b.a = 20$$

$$\Rightarrow \frac{c}{b} = \frac{6}{5}$$

Cevap: D

$$24. 346 \diamond 3^2 + 4^2 + 6 = 31$$

$$473 \diamond 4^2 + 7^2 + 3 = 68$$

$$814 \diamond 8^2 + 1^2 + 4 = 69$$

$$943 \diamond 9^2 + 4^2 + 3 = 100$$

$$782 \diamond 7^2 + 8^2 + 2 = 115$$

Cevap: C

25. 

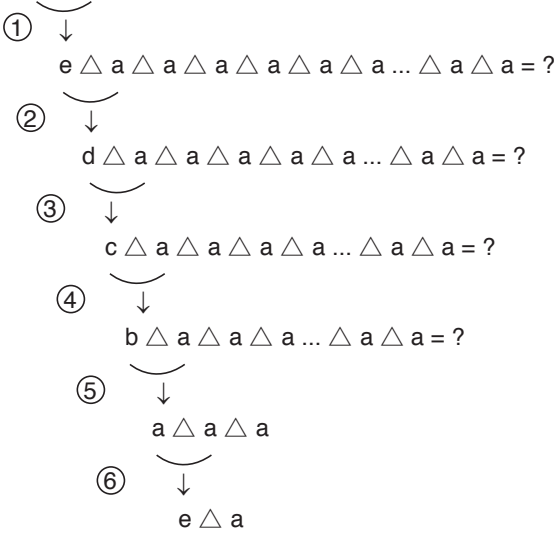
I	II	
BEKAR ≡ 37426		}
KABİR ≡ 42316		
BARAK ≡ 32624		
KEDER ≡ 47576		
⇒ DEKAR = 57426		

Cevap: B

26.  $(c \triangle d) \triangle (x \triangle (a \triangle e)) = c$   
 $\underbrace{(c \triangle d)}_e \triangle (\underbrace{x \triangle (a \triangle e)}_d) = c$   
 $e \triangle (x \triangle d) = c$   
 $\underbrace{x \triangle d}_e = c$   
 $x = c$

Cevap: C

27.  $a \triangle a \triangle a \triangle a \triangle a \triangle a \triangle a \triangle a \triangle a \triangle a \triangle a \triangle a \dots \triangle a \triangle a = ?$



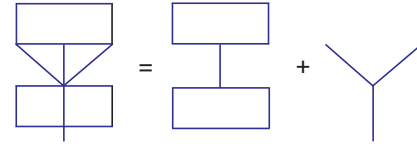
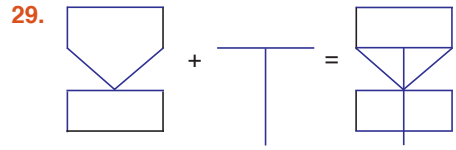
$$\begin{array}{r} 72 \overline{) 5} \\ \underline{14} \phantom{0} \\ 2 \phantom{0} \end{array}$$

Cevap: D

28.  $\triangle = 1, \diamond = 2, \star = 3, \square = 4, \bullet = 5, \circ = 6, \lozenge = 7$

$\bullet \triangle \diamond \star = 5123$

Cevap: E

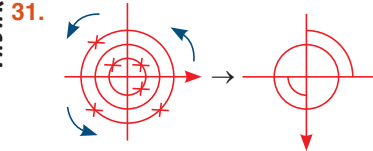


Cevap: B

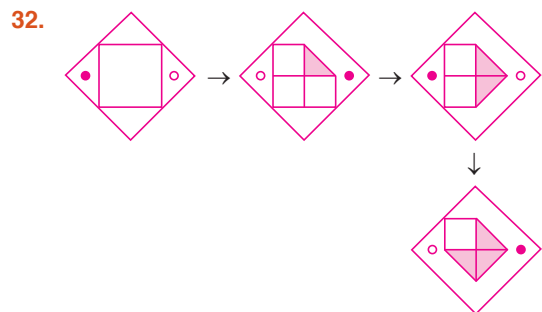


Cevap: C

TASARI EĞİTİM YAYINLARI



Cevap: E



Cevap: B

33.  $[(3,2) \triangle (1,2)] \oplus (5,3)$

$[(3.2 - 2.1, 2.2 - 3.1)] \oplus (5,3)$

$(4,1) \oplus (5,3)$

$(\frac{4+1}{5}, \frac{5+3}{4}) = (1,2)$

Cevap: C

34. I.  $\circ \triangle \triangle = \triangle \square \square \Rightarrow \circ \triangle = \square \square$  ①

II.  $\circ \circ \circ \circ = \square \square \square \Rightarrow \circ = 3k$

$\square = 4k$

①  $\Rightarrow \triangle = 5k$

III.  $\square \triangle ? \equiv \circ \circ \square \square$

$9k + ? \equiv 14k \Rightarrow ? = 5k = \triangle$

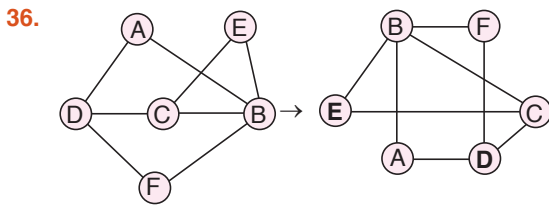
Cevap: A

35.  $\begin{matrix} A & B \\ B & A \end{matrix} = \begin{matrix} \otimes & \star \\ \star & \otimes \end{matrix} \Rightarrow B = \star$

$\begin{matrix} & B & D \\ C & B & \end{matrix} = \begin{matrix} & \star & D \\ C & \star & \end{matrix} = \begin{matrix} & \star & + \\ \bullet & \star & \end{matrix}$

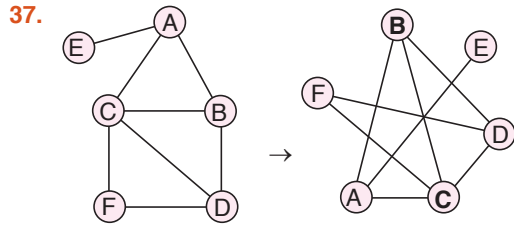
$\Rightarrow C = \bullet, D = +$

Cevap: A



$\Rightarrow X = E ; Y = D$

Cevap: E



$\Rightarrow X = B ; Y = C$

Cevap: B

38. 

5	7	1	3	8
6	10	39	9	4
3	5	14	2	4
8	2	23	6	3

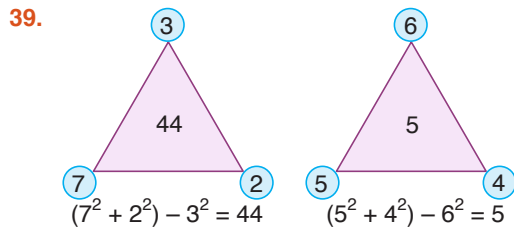
$(5^2 + 7^2) - (3^2 + 8^2) = 1$

$(6^2 + 10^2) - (9^2 + 4^2) = 39$

$(3^2 + 5^2) - (2^2 + 4^2) = 14$

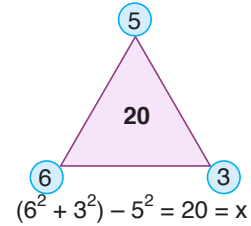
$(8^2 + 2^2) - (6^2 + 3^2) = 23 = ?$

Cevap: C



$(7^2 + 2^2) - 3^2 = 44$

$(5^2 + 4^2) - 6^2 = 5$



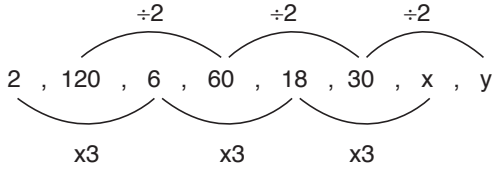
$(6^2 + 3^2) - 5^2 = 20 = x$

$x = 20$

Cevap: A

TASARI EĞİTİM YAYINLARI

40.



$$x = 54, y = 15 \Rightarrow x + y = 69$$

Cevap: A

41.

$$1 - \frac{x}{2 - \frac{3}{1 - \frac{2}{7}}} = 1$$

$$\Rightarrow \frac{x}{2 - \frac{3}{1 - \frac{2}{7}}} = 0 \Rightarrow x = 0$$

42.

$$\begin{aligned} 3 - \frac{\frac{20}{100} - \frac{2}{100}}{\frac{10}{100} - \frac{1}{100}} &= 3 - \frac{\frac{18}{100}}{\frac{9}{100}} \\ &= 3 - \frac{18}{100} \cdot \frac{100}{9} \\ &= 3 - 2 = 1 \end{aligned}$$

Cevap: E

43.  $a < 0 < b$ 

$$\begin{aligned} \Rightarrow a + \sqrt{9a^2} + \sqrt{4b^2} - |a| - |a - b| \\ = a + |3a| + |2b| - (-a) - [-(a - b)] \\ = a - 3a + 2b + a + a - b \\ = b \end{aligned}$$

Cevap: B

44.

$$\begin{aligned} \left(9^{\frac{3}{2}} + 81^{\frac{1}{2}}\right) \cdot 27^{-\frac{2}{3}} \\ = \left(3^{\frac{3}{2} \cdot 2} + 3^{\frac{1}{2} \cdot 2}\right) \cdot (3^3)^{-\frac{2}{3}} \\ = (3^3 + 3^2) \cdot 3^{-2} \\ = (36) \cdot \frac{1}{9} = 4 \end{aligned}$$

Cevap: B

45.

$$\begin{aligned} \left(\frac{\sqrt{6} - \sqrt{3} - 2 + \sqrt{2}}{\sqrt{2} - 1}\right) \cdot (\sqrt{3} + \sqrt{2}) \\ = \left(\frac{\sqrt{3}(\sqrt{2} - 1) - \sqrt{2}(\sqrt{2} - 1)}{(\sqrt{2} - 1)}\right) \cdot (\sqrt{3} + \sqrt{2}) \\ = \left(\frac{(\cancel{\sqrt{2}} - 1) \cdot (\sqrt{3} - \sqrt{2})}{(\cancel{\sqrt{2}} - 1)}\right) \cdot (\sqrt{3} + \sqrt{2}) \\ = (\sqrt{3} - \sqrt{2}) \cdot (\sqrt{3} + \sqrt{2}) = 3 - 2 = 1 \end{aligned}$$

Cevap: D

46.

$$\begin{aligned} \frac{1}{x} + \frac{1}{y} = 3 \Rightarrow \frac{x+y}{\underbrace{x \cdot y}_2} = 3 \\ x + y = 6 \\ \Rightarrow (x + y)^2 = x^2 + \frac{2xy}{4} + y^2 = 36 \\ \Rightarrow x^2 + y^2 = 32 \\ (x - y)^2 = x^2 - 2xy + y^2 = 32 - 4 = 28 \end{aligned}$$

Cevap: A

$$47. \frac{x^n \cdot (x-5)}{(x-5) \cdot (x+1)} \cdot \frac{(x+1)}{x^n} = 1$$

Cevap: A

$$48. \begin{aligned} a - b = 5 &\Rightarrow a = b + 5 \\ b - c = 2 &\Rightarrow b = c + 2 \\ c = 1 &\Rightarrow b = 3 \Rightarrow a = 8 \\ \min(a + b + c) &= 12 \end{aligned}$$

Cevap: C

$$49. \begin{aligned} 3^x = 7 &\Rightarrow 3 = 7^{\frac{1}{x}} \\ &\Rightarrow 3^3 = 7^{\frac{3}{x}} \\ &\Rightarrow 27 = \sqrt[x]{7^3} \end{aligned}$$

Cevap: E

$$50. \begin{aligned} \frac{a+b}{ab} = 1 &\Rightarrow \frac{1}{a} + \frac{1}{b} = 1 \quad [1] \\ \frac{a+c}{a \cdot c} = 2 &\Rightarrow \frac{1}{a} + \frac{1}{c} = 2 \quad [2] \\ \frac{b+2c}{2b \cdot c} = \frac{3}{2} &\Rightarrow \frac{1}{b} + \frac{1}{2c} = \frac{3}{2} \quad [3] \end{aligned}$$

$$\begin{aligned} [1], [3] &\Rightarrow \frac{1}{a} + \frac{1}{b} = 1 \\ + \quad -\frac{1}{b} - \frac{1}{2c} &= -\frac{3}{2} \\ \hline \frac{1}{a} - \frac{1}{2c} &= -\frac{1}{2} \quad [4] \end{aligned}$$

$$\begin{aligned} [2], [4] &\Rightarrow \frac{1}{a} + \frac{1}{c} = 2 \\ + \quad -\frac{1}{a} + \frac{1}{2c} &= \frac{1}{2} \\ \hline \frac{3}{2c} = \frac{5}{2} &\Rightarrow c = \frac{3}{5} \end{aligned}$$

Cevap: B

$$51. \begin{aligned} 2x^2 + (a-4)x + b + 2 &= (x^2 + 1) \cdot B(x) \\ x^2 \text{ yerine } -1 \text{ yazarsak (Write } -1 \text{ instead of } x^2) \\ -2 + (a-4)x + b + 2 &= 0 \\ (a-4)x + b &= 0 \Rightarrow a = 4 \\ &\quad + b = 0 \\ &\quad \quad \quad 4 \end{aligned}$$

Cevap: D

$$52. \begin{aligned} x = 2 &\Rightarrow 2f(0) - f(2) = 8 \\ x = 4 &\Rightarrow 2f(2) - f(0) = 10 \\ &\quad \frac{2f(0) - f(2) = 8}{+ 4f(2) - 2f(0) = 20} \\ &\quad \quad \quad 3f(2) = 28 \Rightarrow f(2) = \frac{28}{3} \end{aligned}$$

Cevap: D

$$53. \begin{aligned} f(g(1)) &= 1 + 4 - 9 = -4 \\ f(g(1)) &= -4 \quad [1] \\ f\left(\frac{x}{4} + \frac{4}{x}\right) &= \frac{16}{x} \\ x = -4 &\Rightarrow f\left(-\frac{4}{4} + \frac{4}{-4}\right) = \frac{16}{-4} \\ f(-2) &= -4 \\ [1] &\Rightarrow g(1) = -2 \end{aligned}$$

Cevap: B

$$54. \begin{aligned} \frac{a}{3} = \frac{b}{5} = \frac{8}{c} &= k \\ a = 3k, b = 5k \text{ ve } c &= \frac{8}{k} \\ a + b - 2c &= 8 \\ 3k + 5k - 2 \cdot \frac{8}{k} &= 8 \\ 8k^2 - 16 &= 8k \\ 8k^2 - 8k - 16 &= 0 \\ k^2 - k - 2 &= 0 \\ (k-2)(k+1) &= 0 \\ k = 2 \text{ ve } k = -1 \\ \text{O halde} \\ c = \frac{8}{k} &\Rightarrow c = \frac{8}{2} = 4 \text{ bulunur.} \end{aligned}$$

Cevap: B



$$\begin{aligned}
 55. \quad |x-1| < 2 \\
 -2 < x-1 < 2 \\
 -2+1 < x < 2+1 \\
 -1 < x < 3
 \end{aligned}$$

$$\begin{aligned}
 \frac{\overbrace{x+2}^{+} + \overbrace{x-3}^{-}}{\underbrace{3-x}_{+} + x} &= \frac{x+2-x+3}{3-x+x} \\
 &= \frac{5}{3} \text{ bulunur.}
 \end{aligned}$$

$$\begin{aligned}
 56. \quad AB6 &= 7.AB + 48 \\
 100A + 10B + 6 &= 7.(10A + B) + 48 \\
 100A + 10B + 6 &= 70A + 7B + 48 \\
 30A + 3B &= 42 \\
 10A + B &= 14 \\
 AB &= 14 \\
 A = 1 \text{ ve } B = 4 \text{ olur.} \\
 \text{O halde} \\
 A + B &= 1 + 4 = 5 \text{ bulunur.}
 \end{aligned}$$

$$\begin{array}{r}
 1 \ A \ B \\
 A \ B \ 3 \\
 + \ A \ 2 \ B \\
 \hline
 1 \ 0 \ 4 \ 7
 \end{array}$$

$$\begin{aligned}
 B + 3 + B &= 7 \text{ veya } 17 \text{ olmalı.} \\
 7 \text{ olduğunda } B &= 2 \\
 17 \text{ olduğunda } B &= 7 \text{ olur.} \\
 B = 2 \text{ olduğundan işlem sağlanmaz.} \\
 b = 7 \text{ ise } A &= 4 \text{ olur.}
 \end{aligned}$$

$$\begin{array}{r}
 147 \\
 473 \\
 + \ 427 \\
 \hline
 1047
 \end{array}$$

$$\text{O halde } A.B = 4.7 = 28 \text{ bulunur.}$$

$$\begin{aligned}
 58. \quad \frac{4! \cdot 7! - 5! \cdot 6!}{3! \cdot 6! - 4! \cdot 5!} \\
 = \frac{4! \cdot 6!(7-5)}{3! \cdot 5!(6-4)} \\
 = \frac{3! \cdot 4! \cdot 5! \cdot 6 \cdot 2}{3! \cdot 5! \cdot 2} = 24 \text{ bulunur.}
 \end{aligned}$$

Cevap: A

Cevap: E

$$\begin{aligned}
 59. \quad (51)_x &= (32)_y \\
 5x + 1 &= 3y + 2 \\
 5x &= 3y + 1 \\
 \downarrow \quad \downarrow \\
 2 \quad 3 &\rightarrow \text{olamaz.} \\
 5 \quad 8 &\rightarrow \text{olamaz.} \\
 8 \quad 13 \\
 11 \quad 18 \\
 \vdots \quad \vdots \\
 x > 5 \text{ ve } y > 3 \text{ olacağından} \\
 \min(x+y) &= 8 + 13 = 21 \text{ olur.}
 \end{aligned}$$

Cevap: B

Cevap: D

$$60. \quad a \cdot b = \frac{2}{9} = \frac{4}{18} \quad (2)$$

$$a \cdot c = \frac{1}{6} = \frac{3}{18} \quad (3)$$

$$b \cdot c = \frac{1}{3} = \frac{6}{18} \quad (6)$$

$$\text{Buna göre} \\ a.c < a.b < b.c \text{ olur.}$$

$$\begin{array}{c}
 \underbrace{c < b} \quad \underbrace{a < c} \\
 \swarrow \quad \searrow \\
 a < c < b \text{ bulunur.}
 \end{array}$$

Cevap: D

Cevap: A

$$\begin{aligned}
61. \quad \frac{2^9 - 5 \cdot 2^4}{12^3} &= \frac{2^9 - 5 \cdot 2^4}{(2^2 \cdot 3)^3} \\
&= \frac{2^9 - 5 \cdot 2^4}{2^6 \cdot 3^3} = \frac{2^4(2^5 - 5)}{2^6 \cdot 3^3} = \frac{2^4 \cdot (32 - 5)}{2^6 \cdot 27} \\
&= \frac{16 \cdot 27}{64 \cdot 27} = \frac{1}{4} \text{ bulunur.}
\end{aligned}$$

Cevap: B

$$\begin{aligned}
62. \quad \frac{x - \sqrt{x}}{x} : \frac{(x-1)^2}{x + \sqrt{x}} &= 6 \\
\frac{x - \sqrt{x}}{x} \cdot \frac{(x + \sqrt{x})}{(x-1)^2} &= 6 \\
\frac{x^2 - x}{x \cdot (x-1)^2} &= 6 \\
\frac{x(x-1)}{x \cdot (x-1)^2} &= 6 \Rightarrow \frac{1}{x-1} = 6 \\
x - 1 &= \frac{1}{6} \\
x &= \frac{1}{6} + 1 \\
x &= \frac{7}{6}
\end{aligned}$$

Cevap: E

$$\begin{aligned}
63. \quad a - b &< 13 \\
\frac{a}{b} &= 3 \\
b &= \frac{a}{3} \text{ olur.} \\
a - \frac{a}{3} &< 13 \\
2a &< 39 \\
a &< \frac{39}{2} \\
\text{En büyük } a \text{ tamsayısı } &19 \text{ olur.}
\end{aligned}$$

Cevap: C

$$\begin{aligned}
64. \quad 2(a + 8) &= 3(b + 6) \\
3(a - 3) &= 4(b - 1) \\
\bullet \quad 2a + 16 &= 3b + 18 \\
2a - 3b &= 2 \\
\bullet \quad 3a - 9 &= 4b - 4 \\
3a - 4b &= 5 \\
\Rightarrow \quad -3/2a - 3b &= 2 \\
2/3a - 4b &= 5 \\
\hline
-6a + 9b &= -6 \\
+ \quad 6a - 8b &= 10 \\
\hline
b = 4 \Rightarrow 2a - 12 &= 2 \\
2a &= 14 \\
a &= 7
\end{aligned}$$

O halde

$$a + b = 7 + 4 = 11 \text{ bulunur.}$$

Cevap: D

TASARI EĞİTİM YAYINLARI

$$\begin{aligned}
65. \quad \frac{2y}{x + \frac{1}{y}} - \frac{3x}{y + \frac{1}{x}} &= \frac{5x^2}{x \cdot y + 1} \\
\frac{2y^2}{x \cdot y + 1} - \frac{3x^2}{x \cdot y + 1} &= \frac{5x^2}{x \cdot y + 1} \\
\frac{2y^2 - 3x^2}{x \cdot y + 1} &= \frac{5x^2}{x \cdot y + 1} \\
2y^2 - 3x^2 &= 5x^2 \\
2y^2 &= 8x^2 \\
y^2 &= 4x^2 \text{ (Her iki tarafın} \\
&\text{karekökü alınırsa)} \\
y &= 2x \\
\Rightarrow \frac{x}{y} &= \frac{1}{2} \text{ bulunur.}
\end{aligned}$$

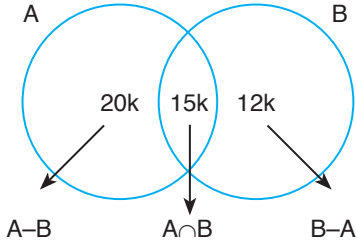
Cevap: A

66.  $3 \cdot S(A-B) = 4 \cdot S(A \cap B) = 5 \cdot S(B-A) = 60k$  olsun.

$$S(A-B) = 20k$$

$$S(A \cap B) = 15k$$

$$S(B-A) = 12k$$



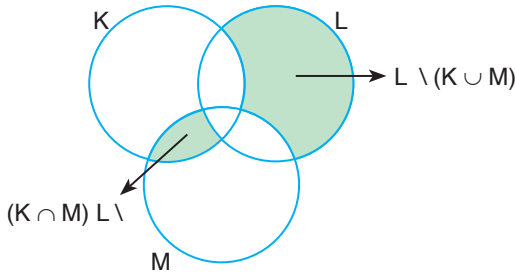
AB kümesinin en az olması için  $k = 1$  alınır.

$$O \text{ halde } S(A \cup B) = 20k + 15k + 12k \\ = 47k$$

$$S(A \cup B) = 47 \text{ bulunur.}$$

**Cevap: D**

67.



Buna göre taralı alanlar

$$[L \setminus (K \cup M)] \cup [(K \cap M) \setminus L] \text{ ifadesi elde edilir.}$$

**Cevap: B**

68.  $x, y \in \mathbb{Z}$

aralığı verilen sayılar tam sayı ise taraf tarafa işlem yapılmaz.

Değer seçilerek işlem yapılır.

$2x - 3y$ 'nin en büyük değeri için  $x$  en büyük  $y$  en küçük değeri almalıdır.

$$x = 8 \text{ ve } y = 1$$

$$2 \cdot 8 - 3 \cdot 1 = 16 - 3 = 13 \text{ bulunur.}$$

**Cevap: E**

69.  $a < |a| \Rightarrow a < 0$  olur.

$$\begin{aligned} & |a - |a - 1|| - |2a| \\ &= |a + a - 1| + 2a \\ &= |2a - 1| + 2a \\ &= -2a + 1 + 2a \\ &= 1 \text{ bulunur.} \end{aligned}$$

**Cevap: E**

70. Bölünen ile bölen yer değiştirdiği aman kalanlar birbirinin toplamaya göre tersi olmak zorunda

O halde

$$3x + m = -(nx - 6)$$

$$3x + m = -nx + 6$$

$$m = 6 \text{ ve } n = -3 \text{ olur.}$$

$$m - n = 6 - (-3) = 6 + 3$$

$$= 9$$

**Cevap: E**

71.  $2x^2 + 3x - m - 1 = 0$

$$x_1 + x_2 = -\frac{b}{a} = -\frac{3}{2} \quad x_1 \cdot x_2 = \frac{c}{a} = -\frac{m-1}{2}$$

$$\frac{x_1}{x_2} + \frac{x_2}{x_1} = 2$$

$$\frac{x_1^2 + x_2^2}{x_1 \cdot x_2} = 2$$

$$\frac{(x_1 + x_2)^2 - 2x_1 \cdot x_2}{x_1 \cdot x_2} = 2$$

$$\frac{\left(-\frac{3}{2}\right)^2 - 2 \cdot \left(-\frac{m-1}{2}\right)}{-\frac{m-1}{2}} = 2$$

$$\frac{\frac{9}{4} + m + 1}{-\frac{m-1}{2}} = 2 \quad \frac{9 + 4m + 4}{4} \cdot \frac{2}{-(m+1)} = 2$$

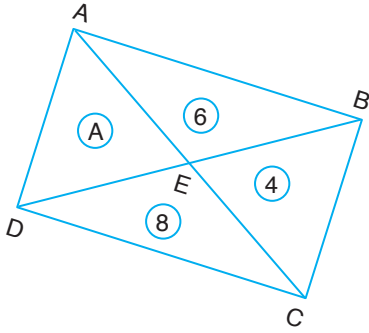
$$13 + 4m = -4m - 4$$

$$8m = -17$$

$$m = -\frac{17}{8}$$

**Cevap: B**

72.



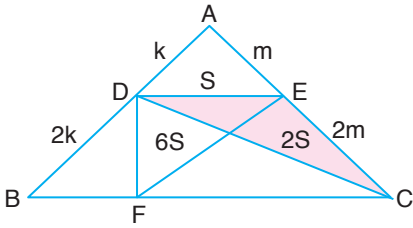
$$\begin{aligned} A(\widehat{DEC}) &= 8 br^2 \\ A(\widehat{EBC}) &= 4 br^2 \\ A(\widehat{AEB}) &= 6 br^2 \\ A(\widehat{DAE}) &= A \end{aligned}$$

$$\frac{A(\widehat{ADE})}{A(\widehat{AEB})} = \frac{A(\widehat{DEC})}{A(\widehat{EBC})} \Rightarrow \frac{A}{6} = \frac{8}{4}$$

$$A = 12 br^2$$

Cevap: D

73.



$$|AD| = k$$

$$|BD| = 2k$$

$$A(\widehat{DEF}) = A(\widehat{DEC})$$

ADC üçgeninde  $A(\widehat{ADE}) = S$  dersek

$A(\widehat{DEC}) = 2S$  olur.

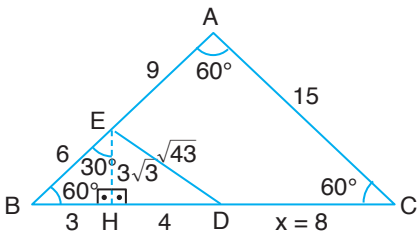
ABC üçgeninde  $A(\widehat{ADC}) = 3S$

$A(\widehat{BDC}) = 6S$  olur.

$$\frac{A(\widehat{DEF})}{A(\widehat{ABC})} = \frac{2S}{9S} = \frac{2}{9} \text{ bulunur.}$$

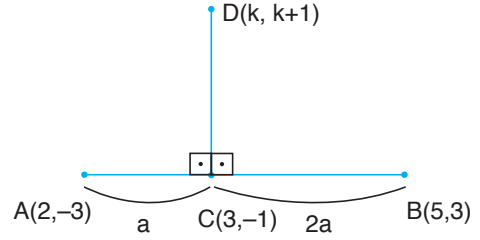
Cevap: A

74.



Cevap: D

75.



$$[AB] \perp [DC]$$

$$\Rightarrow M_{[AB]} \cdot M_{[DC]} = -1 \Rightarrow \frac{3 - (-3)}{5 - (2)} \cdot M_{[DC]} = -1$$

$$\Rightarrow \frac{6}{3} \cdot M_{[DC]} = -1$$

$$\Rightarrow M_{[DC]} = -\frac{1}{2}$$

$$M_{[DC]} = \frac{k+1 - (-1)}{k-3} = -\frac{1}{2}$$

$$\Rightarrow \frac{k+2}{k-3} = -\frac{1}{2} \Rightarrow 2k+4 = -k+3$$

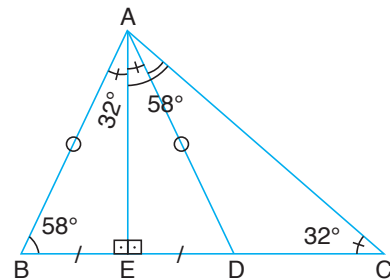
$$3k = -1$$

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

Cevap: B

TASARI EĞİTİM YAYINLARI

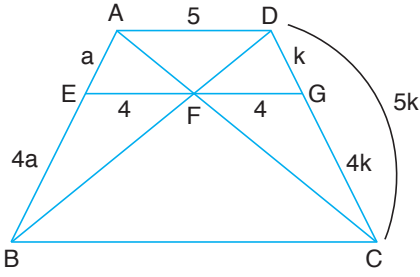
76.



$$\Rightarrow m(\widehat{ABC}) = 58^\circ$$

Cevap: D

77.



$$\frac{|FGI|}{|ADI|} = \frac{|CGI|}{|CDI|} = \frac{4}{5}$$

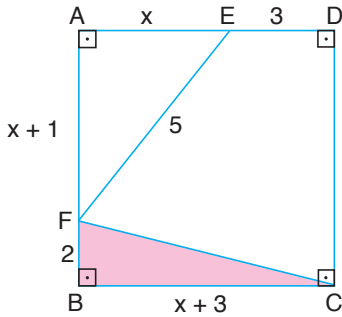
$$\frac{|CGI|}{|CDI|} = \frac{|BEI|}{|BAI|} = \frac{4}{5}$$

$$\frac{|AEI|}{|ABI|} = \frac{|EFI|}{|BCI|}$$

$$\Rightarrow \frac{1}{5} = \frac{4}{|BCI|} \Rightarrow |BCI| = 20 \text{ br}$$

Cevap: A

78.



$$(x+1)^2 + x^2 = 5^2$$

$$x^2 + 2x + 1 + x^2 = 25$$

$$2x^2 + 2x - 24 = 0$$

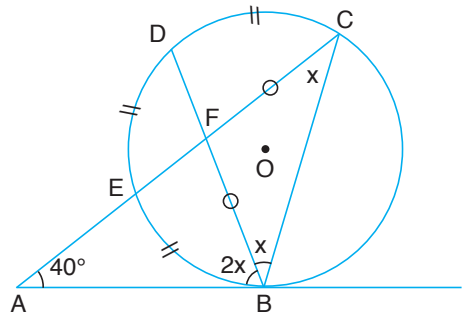
$$x^2 + x - 12 = 0$$

$$(x-3)(x+4) = 0$$

$$\Rightarrow x = 3 \Rightarrow |BCI| = 6 \Rightarrow A(BCF) = \frac{6 \cdot 2}{2} = 6 \text{ br}^2$$

Cevap: B

79.



$$40 + 4x = 180$$

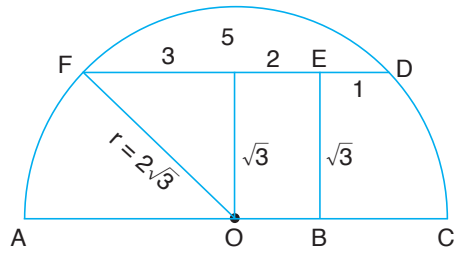
$$4x = 140$$

$$x = 35$$

Cevap: D

TASARI EĞİTİM YAYINLARI

80.



$$\Rightarrow |ACI| = 4\sqrt{3} \text{ br}$$

Cevap: E