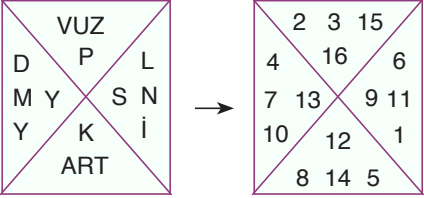


ÇÖZÜMLER

1. $2 + 4 - 4 \rightarrow 2$
 $2 + 5 - 2 \rightarrow 5$
 $3 + 2 - 4 \rightarrow 1$
 $4 + 1 - 7 \rightarrow -2$
 $4 + 5 - 6 \rightarrow 3$
 $5 + 3 - 3 \rightarrow 5$

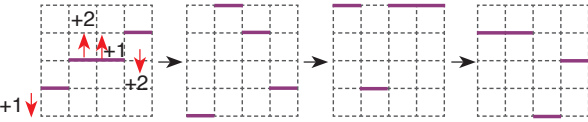
Cevap: C

2. 
SERENAD $\rightarrow 9 + 10 + 14 + 10 + 11 + 8 + 4 = 66$

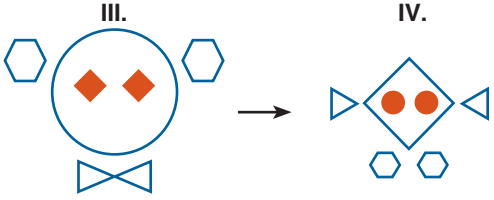
Cevap: D

3. $a + a = 12$
 $a = 6$
 $b + c = 5$
 $\Rightarrow (a - b - c)(a + b + c)$
 $(6 - (b + c))(6 + b + c)$
 $(6 - 5) \cdot (6 + 5) = 11$

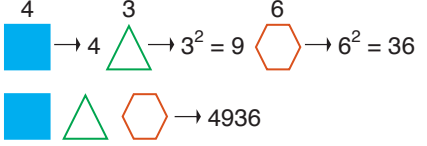
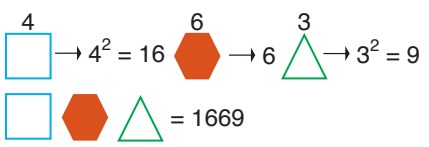
Cevap: A

4. 
Cevap: B

Cevap: B

5. 

Cevap: C

6. \bullet 
 \bullet 

Cevap: E

7. $2\ 3\ 6\ 1 \rightarrow 2 \cdot 6 - 3 \cdot 1 = 9$
 $2\ 4\ 5\ 3 \rightarrow 2 \cdot 5 - 4 \cdot 3 = -2$
 $3\ 6\ 4\ 2 \rightarrow 3 \cdot 4 - 6 \cdot 2 = 0$
 $4\ 4\ 8\ 1 \rightarrow 4 \cdot 8 - 4 \cdot 1 = 28$
 $5\ 6\ 8\ 3 \rightarrow 5 \cdot 8 - 6 \cdot 3 = 22$
 $6\ 8\ 7\ 3 \rightarrow 6 \cdot 7 - 8 \cdot 3 = 18$

Cevap: B

8.

4	+	6	-	3	=	7
3	+	5	-	7	=	1
7	+	6	-	4	=	9
1	+	5	-	3	=	3
2	+	7	-	5	=	4
X	+	7	-	6	=	8

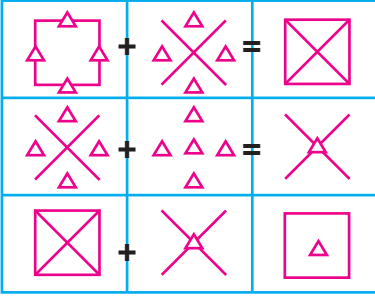
$x + 7 - 6 = 8$

$x + 1 = 8$

$x = 7$

Cevap: E

9. Üçgenler çıkarılıyor.



Cevap: D

10.



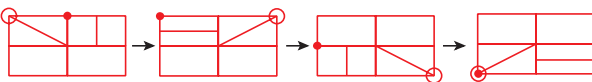
Cevap: C

11.



Cevap: B

12.

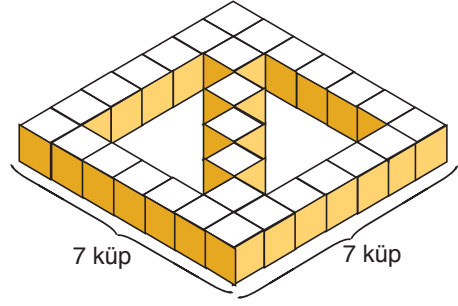


Cevap: C

13. 5^{+3} 8^{x2} 16^{+3} 19^{x2} 38^{+3} 41^{x2} 82

Cevap: D

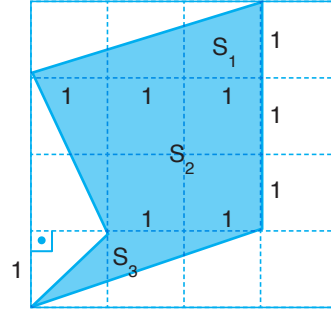
14.



- Şekil tam dolu olsaydı $7 \cdot 7 = 49$ küp
 - Şekilde 29 küp var.
- O halde boşlukta $49 - 29 = 20$ küp olmalı.

Cevap: D

15.



$$S_1 = \frac{1 \cdot 3}{2} = \frac{3}{2}$$

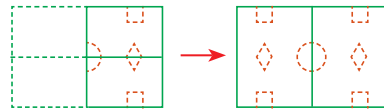
$$S_2 = \frac{(2+3) \cdot 2}{2} = 5$$

$$S_3 = \frac{2 \cdot 1}{2} = 1$$

$$\Rightarrow S_1 + S_2 + S_3 = 1 + 5 + \frac{3}{2} = \frac{15}{2}$$

Cevap: A

16.



Cevap: B

17. III, IV üretilebilir.

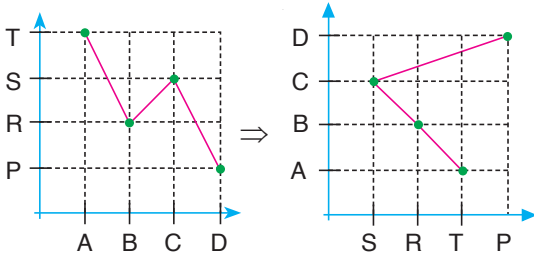
Cevap: C

18. D şıkında noktalar aynı daire içinde. O yüzden farklı.



Cevap: D

19.



Cevap: D

$$\begin{array}{|c|} \hline 5 \\ \hline 7 \\ \hline 3 \\ \hline \end{array} = 12 \Rightarrow \begin{array}{|c|} \hline Y \\ \hline 5 \\ \hline 2 \\ \hline \end{array} = 11 \rightarrow Y + 5 = 11 \\ Y = 6 \\ \rightarrow 5 \cdot 2 = X \\ X = 10$$

$$X + Y = 10 + 6 = 16$$

Cevap: C

21.

$$\begin{array}{|c|} \hline 27 \\ \hline \end{array} \rightarrow (2-7) \cdot 3 = -15$$

$$\begin{array}{|c|} \hline 93 \\ \hline \end{array} \rightarrow (9-3) + 4 = 10$$

$$\begin{array}{|c|} \hline 43 \\ \hline \end{array} \rightarrow 4 \cdot 3 + 5 = 17$$

$$\begin{array}{|c|} \hline 52 \\ \hline \end{array} + \begin{array}{|c|} \hline 91 \\ \hline \end{array}$$

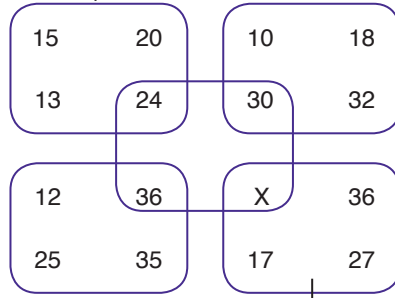
$$\begin{array}{|c|} \hline 5 \cdot 2 + 5 \\ \hline \end{array} + \begin{array}{|c|} \hline 9 - 1 + 4 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline 15 \\ \hline \end{array} + \begin{array}{|c|} \hline 12 \\ \hline \end{array}$$

$$1 - 5 + 4 + (1 - 2) \cdot 3 = 0 - 3 = -3$$

Cevap: B

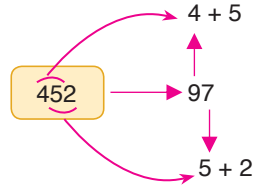
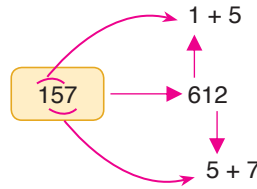
$$22. = \frac{15 + 13 + 20}{2} = 24$$



$$40 = \frac{17 + 27 + 36}{2} = x$$

Cevap: B

23.



Cevap: C

Cevap: B

24.

$$\begin{array}{|c|} \hline 9 \\ \hline 12 \quad 16 \\ \hline \end{array} \rightarrow 12^2 = 9 \cdot 16$$

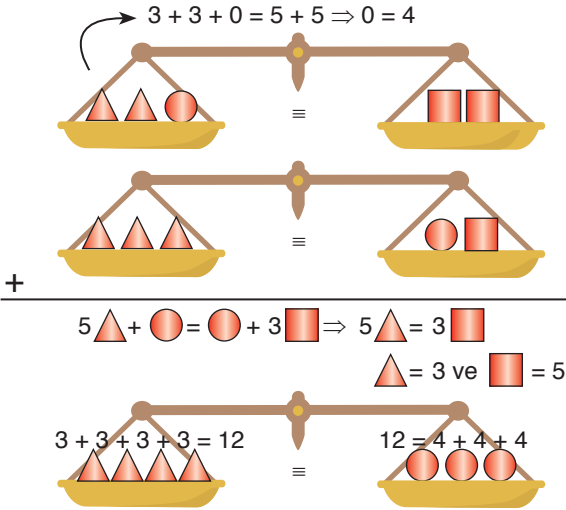
$$\begin{array}{|c|} \hline 25 \\ \hline 15 \quad 9 \\ \hline \end{array} \rightarrow 15^2 = 9 \cdot 25$$

$$\begin{array}{|c|} \hline 5 \\ \hline 20 \quad 80 \\ \hline \end{array} \rightarrow 20^2 = 5 \cdot 80$$

$$\begin{array}{|c|} \hline 121 \\ \hline 22 \quad X \\ \hline \end{array} \rightarrow 22^2 = 121 \cdot x \Rightarrow x = 4$$

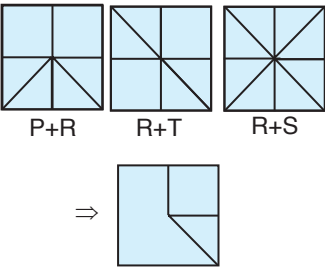
Cevap: B

25.



Cevap: D

26.



Cevap: E

27.

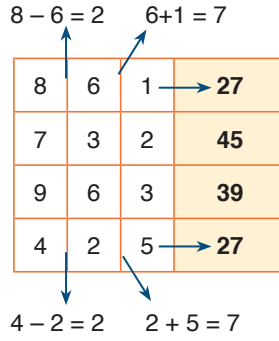
$$\begin{bmatrix} 3 & 1 & x & 4 \\ + & 6 & y & 9 & 5 \\ \hline 1 & 0 & 0 & 1 & 9 \end{bmatrix}, \begin{bmatrix} 4 & 9 & 1 & x \\ - & 3 & y & 0 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \end{bmatrix}$$

$2 \rightarrow x - 1 = 1$
 $x = 2$

$8 \rightarrow 9 - y = 1$
 $y = 8$

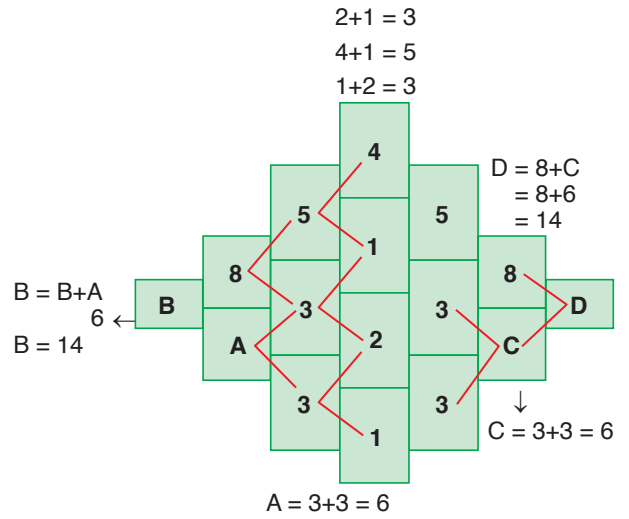
Cevap: C

28.



Cevap: B

29.

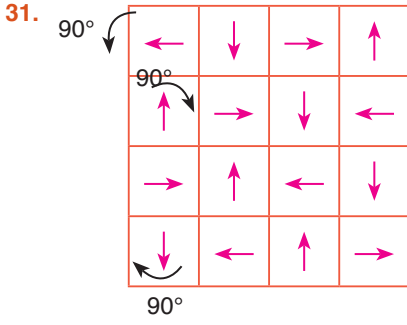


$$A + B + C + D = 6 + 14 + 6 + 14 = 40$$

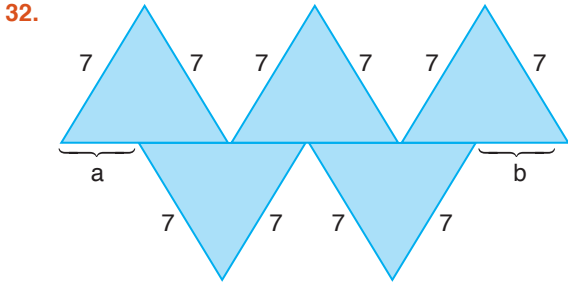
Cevap: C

30. Yarıçapı en küçük olan G çarkı en fazla döner.

Cevap: E



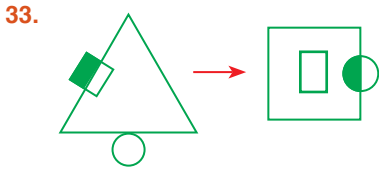
Cevap: D



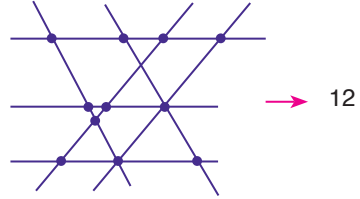
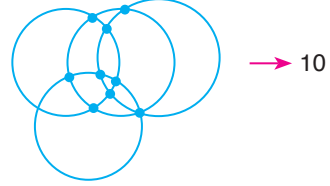
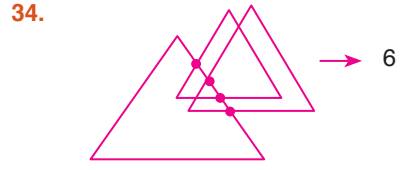
$$7 + 7 + 7 - (7 + 7) = a + b$$

$$\Rightarrow \text{Çevre} = 11 \cdot 7 = 77 \text{ olur.}$$

Cevap: B

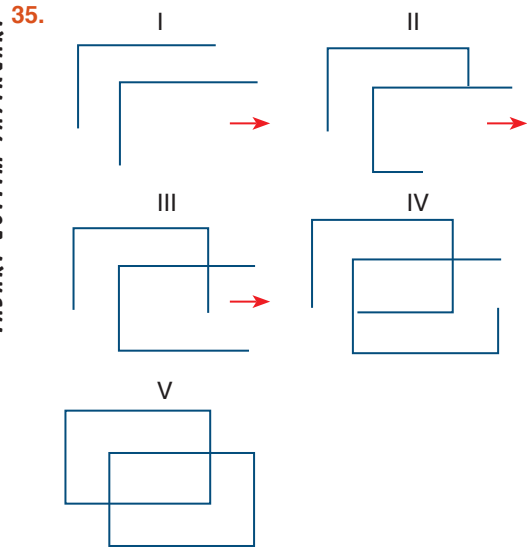


Cevap: A



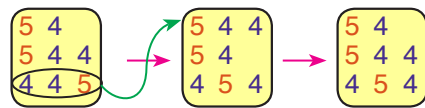
Cevap: D

TASARI EĞİTİM YAYINLARI



Cevap: D

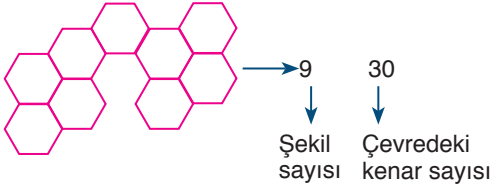
36. Her seferinde en alt kısımdaki sayılar 180° dönerek en üst sıraya yerleşiyor. Eğer sayının altında baş???? varsa o bir alt sıraya kayıyor.



4. şekil

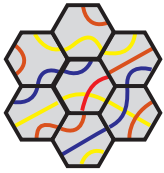
Cevap: A

37.



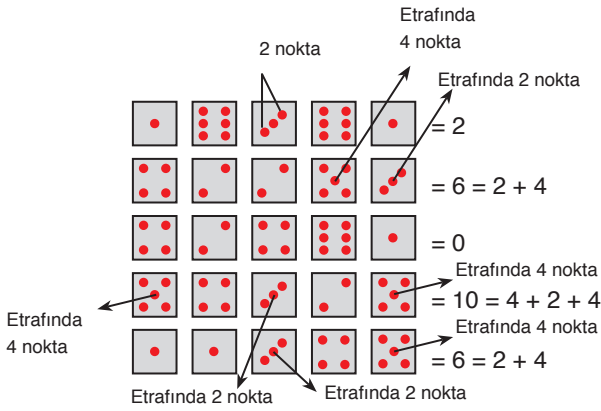
Cevap: D

38.



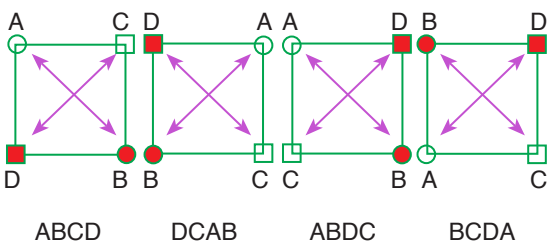
Cevap: B

39.



Cevap: C

40.



Cevap: A

$$41. \quad 2 - \frac{\left(\frac{1}{2} - 1\right) : \frac{1}{2}}{\left(\frac{1}{3} - 1\right) : \frac{2}{3}} = 2 - \frac{-\frac{1}{2} : \frac{1}{2}}{-\frac{2}{3} : \frac{2}{3}}$$

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

Cevap: C

$$42. \quad \frac{10^8(10-1)}{3 \cdot 10^4} \cdot \frac{10^{-15}(10+1)}{11 \cdot 10^{-1} \cdot 10^{-19}}$$

$$\frac{10^{-7} \cdot 9^3 \cdot 11}{11 \cdot 9 \cdot 10^{-16}} = 3 \cdot 10^9$$

Cevap: C

$$43. \quad (4 \cdot 9)^2 \cdot (8 \cdot 2^{-3} \cdot 5^{-3})^{-3} = 2^a \cdot 3^b \cdot 5^c$$

$$(2^2 \cdot 3^2)^2 \cdot (2^3 \cdot 2^{-3} \cdot 5^{-3})^{-3} = 2^a \cdot 3^b \cdot 5^c$$

$$2^4 \cdot 3^4 \cdot 2^{-9} \cdot 2^9 \cdot 5^9 = 2^a \cdot 3^b \cdot 5^c$$

$$2^{4-9+9} \cdot 3^4 \cdot 5^9 = 2^a \cdot 3^b \cdot 5^c$$

$$\Rightarrow 2^4 \cdot 3^4 \cdot 5^9 = 2^a \cdot 3^b$$

$$\Rightarrow a = 4, b = 4, c = 9 \quad a - b + c = 4 - 4 + 9 = 9$$

Cevap: D

$$44. \quad x = \frac{1}{\sqrt{2}} \Rightarrow x^2 = \frac{1}{2}$$

$$y = \frac{1}{2\sqrt{2}} \Rightarrow y^2 = \frac{1}{8}$$

$$z = \frac{1}{2} \Rightarrow z^2 = \frac{1}{4}$$

$$x > z > y$$

Cevap: D

$$45. \quad \frac{x+9}{x-2} + \frac{11x}{2-x} = 5 + \frac{2x}{x+1}$$

$$\frac{x+9-11}{x-2} = \frac{2x}{x+1} + 5$$

$$\frac{x-2}{x-2} = \frac{2x}{x+1} + 5 \Rightarrow -4 = \frac{2x}{x+1}$$

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

$$6x = -4$$

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

Cevap: A

$$46. \frac{2x}{2y} = \frac{-3z}{3t} = 4$$

$$\Rightarrow \frac{2x-3z}{2y-3t} = 4$$

$$\Rightarrow \frac{2x-3z}{2y-3t} = \frac{2x-3z}{2y-3t} = k$$

$$\Rightarrow -m = -3$$

$$m = 3$$

Cevap: D

$$47. (f+g)(2) + g(2)$$

$$\Rightarrow f(x) = \sqrt{x+14} \quad f(2) = \sqrt{16}$$

$$2 \quad 2 \quad = 4$$

$$\Rightarrow g(x) = 2^{2x+3} \quad g(2) = 2^5 = 32$$

$$2$$

$$\Rightarrow f(2) + g(2) = 4 + 32 = 36$$

Cevap: C

$$48. \begin{array}{r} a + 2b - 3c = 10 \\ 3a + 6b + c = 20 \\ + \quad a - 3b + 7c = 10 \\ \hline 5a + 5b + 5c = 40 \\ 5(a + b + c) = 40 \\ a + b + c = 8 \end{array}$$

Cevap: E

$$49. \bullet x = -2 \text{ için}$$

$$(-2+2).P(-2-1) = 3.(-2)^2 - 8(-2) + k$$

$$0 = 12 + 16 + k$$

$$k = -28$$

$$\bullet (x+2)P(x-1) = 3x^2 - 8x - 28$$

$$(x+2)P(x-1) = (x+2)(3x-14)$$

$$P(x-1) = 3x - 14$$

$$x = -2 \Rightarrow P(-3) = -6 - 14 = -20$$

Cevap: C

$$50. x = 1 \text{ için}$$

$$P(1+1) = (1-1).B(1) + K$$

$$P(2) = K$$

$$\Rightarrow x = 5 \text{ için}$$

$$P(5-3) = -5^2 + 3.5 + 4$$

$$P(2) = -25 + 15 + 4$$

$$= -6$$

Cevap: D

$$51. 2 > -3,$$

$$\Rightarrow 2 \odot (-3) = 2.2 - (-3) = 7$$

$$\Rightarrow [2 \odot (-3)] \odot 8 = 7 \odot 8$$

$$7 < 8$$

$$\Rightarrow 7 \odot 8 = 7 - 2.8 = 7 - 16 = -9$$

Cevap: B

$$52. \bullet 100A + 50 + B + 200 + 10B + A = 944$$

$$101A + 11B = 944 - 250$$

$$101.A + 11B = 694$$

$$6 \quad 8$$

$$\bullet 6C4 - 46C = 171 \Rightarrow C = 3$$

$$\Rightarrow A + B + C = 6 + 8 + 3 = 17$$

Cevap: B

$$53. (m4)_{m+1} = 4m + 14$$

$$m.(m+1)^1 + 4.(m+1)^0 = 4m + 14$$

$$m^2 + m + 4 = 4m + 14$$

$$m^2 - 3m - 10 = 0$$

$$\quad \quad \quad \widehat{-52}$$

$$\Rightarrow m = 5$$

Cevap: B

54. $x \rightarrow 3 + 2 + 6 + 7 + 2 + 1 + 3 = 24$
 $2 + 4 = 6$
 $y \rightarrow 4 + 7 + 5 + 1 + 1 + 8 + 9 = 35$
 $3 + 5 = 8$
 $x \cdot y + x + y = 6 \cdot 8 + 6 + 8$
 $= 62$
 $\Rightarrow 6 + 2 = 8$ olur.

Cevap: E

55. $f(1, 2) = 2 \cdot 1 - 2 = 0$
 $f(2, 1) = 2 \cdot 2 - 1 = 3$
 $\Rightarrow f(f(1, 2), f(2, 1))$
 $f(0, 3) = 2 \cdot 0 - 3 = -3$

Cevap: A

56. $6! + 7! = 2^x \cdot 3^y \cdot z$
 $6! + 7 \cdot 6! = 2^x \cdot 3^y \cdot z$
 $6! (1+7) = 2^x \cdot 3^y \cdot z$
 $6! \cdot 8 = 2^x \cdot 3^y \cdot z$
 $1 \cdot 2 \cdot 3 \cdot 4 \cdot 5 \cdot 6 \cdot 8 = 2^x \cdot 3^y \cdot z$
 $2^7 \cdot 3^2 \cdot 5 = 2^x \cdot 3^y \cdot z$
 $x = 7, y = 2, z = 5$
 $x + y + z = 7 + 2 + 5 = 14$ olur.

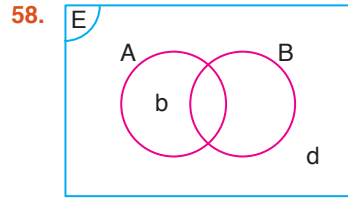
Cevap: D

57. $|x - 3| = 3x - 1$

↙ ↘

$x - 3 = 3x - 1$ $x - 3 = -3x + 1$
 $-2 = 2x$ $4x = 4$
 $-1 = x$ $x = 1$
 $x = -1$ negatif yapıyor. $3x - 1$ o yüzden alınmaz.

Cevap: D



$$\Rightarrow B = \{a, c, e\}$$

Cevap: A

59. $x^2 - 5x \leq -4$
 $x^2 - 5x + 4 \leq 0$

$\frac{1 \quad 4}{+ \quad - \quad +} \Rightarrow [1, 4]$

$$|x - 1| \leq 2$$

$$-2 \leq -1 \leq 2$$

$$-1 \leq x \leq 3 \Rightarrow [-1, 3]$$

$$[1, 4] \cap [-1, 3] = [1, 3]$$

$$\Rightarrow |x - 2| \leq 1$$

Cevap: E

60. $f(x) = ax + b$
 $(ax + b)^2 = x^2 + 6x - 2(ax + b) + 8$
 $a^2x^2 + 2abx + b^2 = x^2 + 6x - 2ax - 2b + 8$
 $\Rightarrow a^2 = 1 \Rightarrow a = -1$
 $\Rightarrow b^2 = -2b + 8 \Rightarrow b^2 + 2b - 8 = 0 \Rightarrow b = -4$ veya $b = +2$
 $\Rightarrow f(x) = ax + b = -x - 4$ ve $f(3) = -3 - 4 = -7$

Cevap: E

61. • $2x - 1 = 3.5$
 $2x - 1 = 15$
 $2x = 16 \Rightarrow x = 8$
 • $3y + 4 = 11.5$
 $3y + 4 = 55$
 $3y = 51 \Rightarrow y = 17$
 $\Rightarrow y - x = 17 - 8 = 9$

Cevap: B

$$62. \frac{5x+4}{x^2+2x} = \frac{A}{x(x+2)} + \frac{B}{x(x)}$$

$$\frac{5x+4}{x^2+2x} = \frac{Ax+2A+Bx}{x^2+2x}$$

$$5x+4 = (A+B)x+2A$$

$$\Rightarrow 2A = 4 \text{ ve } A = 2$$

$$\Rightarrow \frac{A+B}{2} = 5 \text{ ve } B = 3$$

$$\Rightarrow A+B = 2+3 = 5$$

Cevap: D

$$63. a = 2 \text{ ve } b = 3$$

$$\frac{a+2b}{b-a} = \frac{2+2 \cdot 3}{3-2} = \frac{8}{1} = 8$$

Cevap: E

$$64. \frac{a^2+b^2}{a \cdot b} = \frac{a^2}{ab} + \frac{b^2}{ab} = 3$$

$$\frac{a}{b} + \frac{b}{a} = 3$$

$$\Rightarrow \left(\frac{a}{b} + \frac{b}{a} = 3\right)^2$$

$$\frac{a^2}{b^2} + 2 \cdot \frac{a}{b} \cdot \frac{b}{a} + \frac{b^2}{a^2} = 9$$

$$\frac{a^2}{b^2} + \frac{b^2}{a^2} = 7$$

Cevap: C

$$65. \bullet \frac{a+3b}{b} \neq \frac{7}{3} \Rightarrow 3a+5b=7b$$

$$3a = -2b$$

$$\bullet \frac{a+c}{c} \neq \frac{1}{3} \Rightarrow 3a+3c=c$$

$$3a = -2c$$

$$\Rightarrow a = -2, b = 3, c = 3$$

$$\Rightarrow \frac{a-c}{b-a} = \frac{-2-3}{3+2} = -\frac{5}{5} = -1$$

Cevap: B

$$66. \frac{x+x\sqrt{x}+\sqrt{x}+1}{x^2-1} = \frac{-5}{2}$$

$$\frac{x(\sqrt{x}+1)+(\sqrt{x}+1)}{(x-1)(x+1)} = \frac{-5}{2}$$

$$\frac{(\sqrt{x}+1)(x+1)}{(x-1)(x+1)} = \frac{-5}{2} \Rightarrow \frac{\sqrt{x}+1}{(x-1)(x+1)} = \frac{-5}{2}$$

$$\sqrt{x} - = -\frac{2}{5}$$

$$\sqrt{x} = -\frac{2}{5} + 1$$

$$\sqrt{x} = \frac{3}{5}$$

$$x = \frac{9}{25}$$

Cevap: B

$$67. \frac{1}{a} < \frac{1}{b} < \frac{1}{c} \Rightarrow a > b > c$$

$$\frac{|2a-b|}{+} + \frac{|2b-c|}{+} - \frac{|2a-c|}{+}$$

$$2a-b+2b+c-2a+c$$

$$\Rightarrow b$$

Cevap: E

$$68. f(g(1)) = 2 \cdot 1 - 5 = -3$$

$$f(g(1) - (+1)) = 2(g(1) - 1) + 1$$

$$f(g(1)) = 2g(1) - 1$$

$$2g(1) - 1 = -3$$

$$2g(1) = -2$$

$$g(1) = -1$$

Cevap: B

$$69. \bullet a \cdot b < 0$$

$$+ -$$

$$\bullet a + c = 0$$

$$+ -$$

$$\bullet b + c < 0$$

$$- -$$

$$\Rightarrow a, b, c = +, -, -$$

Cevap: D

70. $\left| \frac{a}{b} \right| = 5c$
 $\left| \frac{b}{c} \right| = -4a$
 $\times \left| \frac{c}{a} \right| = -2b$

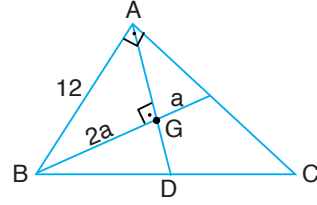
$$\left| \frac{a}{b} \cdot \frac{b}{c} \cdot \frac{c}{a} \right| = 40a \cdot b \cdot c$$

$$1 = 40abc$$

$$abc = \frac{1}{40}$$

Cevap: C

72.



$$12^2 = 2a \cdot 3a$$

$$144 = 6a^2 \Rightarrow a^2 = 24$$

$$|AG|^2 = 2a \cdot a = 2a^2 = 48$$

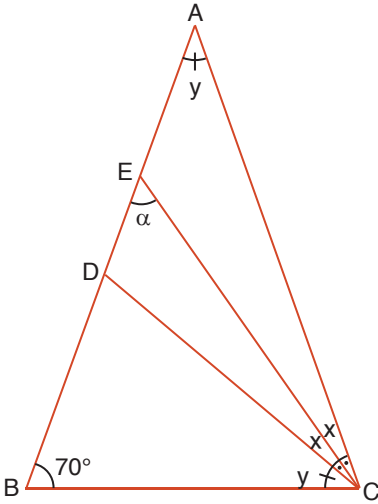
$$|AG| = 4\sqrt{3}$$

$$|GD| = \frac{|AG|}{2} = 2\sqrt{3}$$

$$\rightarrow |BC| = 2(|AG| + |GD|) = 2 \cdot 6\sqrt{3} = 12\sqrt{3}$$

Cevap: E

71.



ABC üçgeninde

$$2x + 2y + 70 = 180^\circ$$

$$2x + 2y = 110^\circ$$

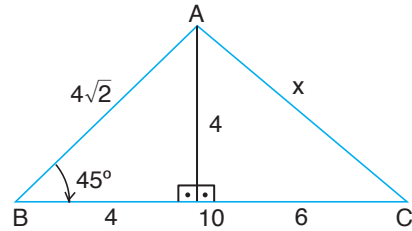
$$x + y = 55^\circ$$

$$a = x + y = 55^\circ$$

Cevap : C

TASARI EĞİTİM YAYINLARI

73.



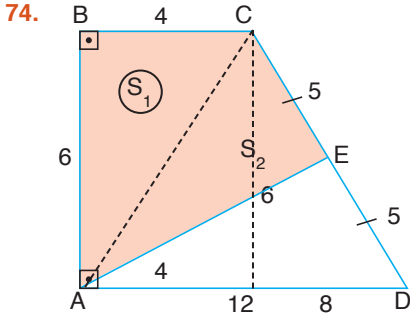
$$x^2 = 4^2 + 6^2$$

$$x^2 = 16 + 36$$

$$x = \sqrt{52}$$

$$x = 2\sqrt{13}$$

Cevap : A



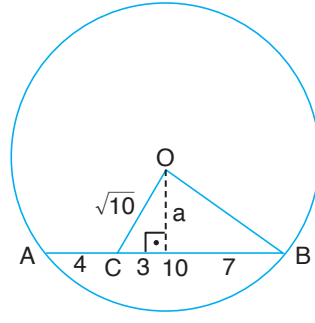
$$S_1 = \frac{4 \cdot 6}{2} = 12$$

$$S_2 = \left(\frac{12 \cdot 6}{2}\right) \cdot \frac{1}{2} = 18$$

$$S_1 + S_2 = 30 \text{ br}^2$$

Cevap : D

76.



$$3^2 + a^2 = (\sqrt{10})^2$$

$$9 + a^2 = 10$$

$$a^2 = 1$$

$$a = 1$$

$$\Rightarrow a^2 + 7^2 = |OB|^2$$

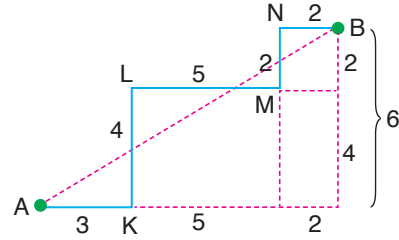
$$1 + 49 = |OB|^2$$

$$|OB| = 5\sqrt{2}$$

Cevap: E

TASARI EĞİTİM YAYINLARI

77.



$$\Rightarrow |AB|^2 = 6^2 + 10^2$$

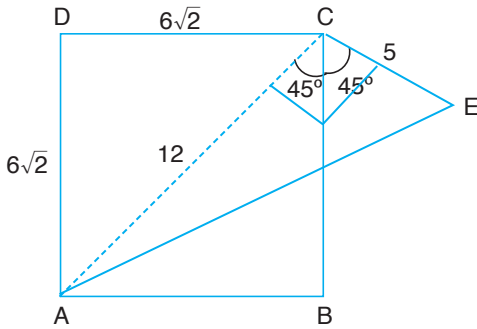
$$|AB|^2 = 136$$

$$|AB| = \sqrt{136}$$

$$|AB| = 2\sqrt{34}$$

Cevap: C

75.



$$CAE 5^2 + 12^2 = |AE|^2$$

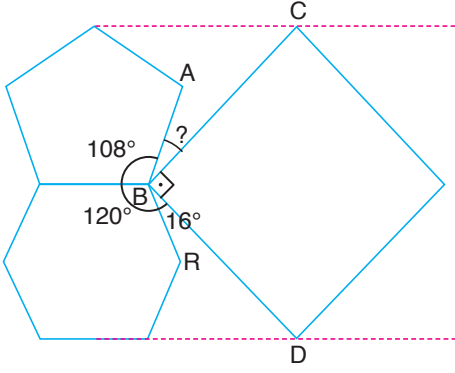
$$25 + 144 = |AE|^2$$

$$169 = |AE|^2$$

$$|AE| = 13 \text{ cm}$$

Cevap : A

78.



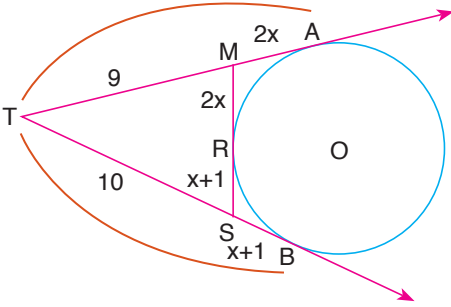
$$? = 360^\circ - (108^\circ + 120^\circ + 16^\circ + 50^\circ)$$

$$? = 360^\circ - 334^\circ$$

$$? = 26^\circ \text{ olur.}$$

Cevap: C

79.



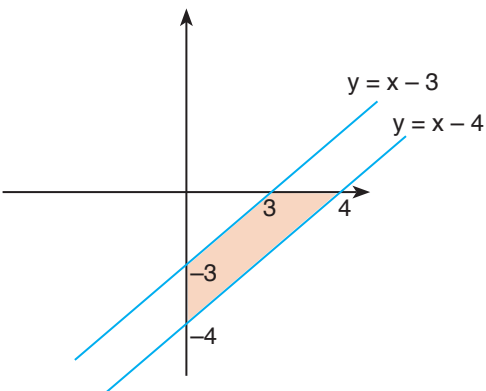
$$2x + 9 = 10 + x + 1$$

$$2x + 9 = x + 11$$

$$x = 2$$

Cevap: C

80.



$$\begin{aligned} T.A &= \frac{4 \cdot 4}{2} - \frac{3 \cdot 3}{2} \\ &= 8 - \frac{9}{2} = \frac{7}{2} \end{aligned}$$

Cevap: E