

Bu testte cevaplayacağınız toplam soru sayısı 80'dir.

$$1. \left(\frac{5}{10}\right)^{-1} + \frac{2}{\frac{5}{10} + \frac{2}{\left(\frac{5}{10}\right)^{-1}}}$$

$$\frac{10}{5} + \frac{2}{\frac{1}{2} + \frac{2}{\frac{10}{5}}} = 2 + \frac{2}{\frac{1}{2} + \frac{2}{5}}$$

$$2 + \frac{2}{\frac{1}{2} + 1} = 2 + \frac{2}{\frac{3}{2}} = 2 + \frac{4}{3}$$

$$= \frac{10}{3}$$

Cevap: C

$$2. \frac{a^4 \cdot 8a^3 \cdot -a^{10}}{4a^2 \cdot -a^3} = \frac{-8a^{17}}{-4a^5}$$

$$= 2 \cdot a^{12}$$

Cevap: D

$$3. \frac{3^{3x}}{5} = 4^{2x}$$

$$\frac{3^{3x}}{4^{2x}} = 5$$

$$\left(\frac{3^{3x}}{4^{2x}}\right)^{\frac{1}{x}} = 5^{\frac{1}{x}}$$

$$\frac{3^3}{4^2} = 5^{\frac{1}{x}}$$

$$\frac{1}{5^x} = \frac{27}{16}$$

Cevap: A

$$4. \frac{10^{40}(5 \cdot 10^2 - 3 + 7 \cdot 10^1)}{10^{40}(3 \cdot 10 - 3)}$$

$$\frac{567}{27} = 21$$

Cevap: B

$$5. \sqrt{5 - \sqrt{21}} - \sqrt{5 + \sqrt{21}}$$

$$\sqrt{\frac{x \cdot 2 \cdot (5 - \sqrt{21})}{x^2}} - \sqrt{\frac{2(5 + \sqrt{21})}{2}}$$

$$\frac{\sqrt{10 - 2\sqrt{21}}}{\sqrt{2}} - \frac{\sqrt{10 + 2\sqrt{21}}}{\sqrt{2}}$$

$$\frac{\sqrt{7} - \sqrt{3} - (\sqrt{7} + \sqrt{3})}{\sqrt{2}}$$

$$\frac{-2\sqrt{3}}{\sqrt{2}} = \frac{-2\sqrt{6}}{2} = -\sqrt{6}$$

Cevap: B

$$6. a = 3k$$

$$b = 7k$$

$$c = 6k$$

$$a + b + c = 6k$$

$$3k + 7k + 6k = 16k = 64$$

$$k = 4$$

$$\Rightarrow \text{Ç} = 3k = 3 \cdot 4 = 12$$

Cevap: C

$$7. \sqrt{3 \cdot \sqrt[3]{24 + 3}}$$

$$\sqrt{3 \cdot \sqrt[3]{27}}$$

$$\sqrt{3 \cdot 3} = \sqrt{9} = 3$$

Cevap: E

8. $A = 5x + 2 = 6y + 3 = 11z + 8$
 $A + 3 = 5x + 5 = 6y + 6 = 11z + 11$
 $A + 3 = \text{oket}(5, 6, 11)k$
 $A + 3 = 330k$
 $A + 3 = 330 \rightarrow A = 327$
 $327 = 6y + 3 \Rightarrow 6y = 324$
 $y = 54$

Cevap: E

9. $\frac{3^{\frac{1}{4}}}{\frac{2}{3^3}} = (3^x)^2$
 $3^{\frac{1}{4} - \frac{2}{3}} = 3^{2x}$
 $3^{\frac{3-8}{12}} = 3^{2x}$
 $3^{-\frac{5}{12}} = 3^{2x}$
 $2x = \frac{-5}{12}$
 $x = \frac{-5}{24}$

10. • $a \cdot \frac{b^2}{+} \cdot \frac{c^4}{+} < 0 \Rightarrow a < 0$
• $c - a < 0 \Rightarrow c < a \Rightarrow c < 0$
• $\frac{b^2}{+} \cdot b^3 \cdot \frac{c^5}{-} < 0 \Rightarrow b > 0$
 $\Rightarrow c < a < b$

11. $a + b = 13$
 $\frac{13}{2} \quad \frac{13}{2}$
 $\Rightarrow a \cdot b = \frac{13}{2} \cdot \frac{13}{2} = \frac{169}{4}$

Cevap: D

12. $3a + 2b + 5c = 78$
 $\downarrow \quad \downarrow \quad \downarrow$
 $1 \quad 0 \quad 15$

Cevap: B

13. • $2^a = 3^b \Rightarrow 2^{\frac{a}{b}} = 3^{\frac{b}{b}}$
 $2^{\frac{a}{b}} = 3$
 $\left(2^{\frac{a}{b}}\right)^2 = 3^2$
 $4^{\frac{a}{b}} = 9$
• $3^b = 7^c \Rightarrow 3^{\frac{b}{b}} = 7^{\frac{c}{b}}$
 $3^1 = 7^{\frac{c}{b}}$
 $3^2 = \left(7^{\frac{c}{b}}\right)^2$
 $9 = 49^{\frac{c}{b}}$
 $\Rightarrow 4^{\frac{a}{b}} - 49^{\frac{c}{b}} = 9 - 9 = 0$

Cevap: D

Cevap: A

Cevap: E

14. $a + b - c = 14$
 $a - b + c = 16$
 $+ \quad b + c - a = 12$

 $a + b + c = 42 \quad (c = a + b - 14)$
 $a + b + a + b - 14 = 42$
 $2(a + b) = 56$
 $a + b = 28$

Cevap: A

$$15. \sqrt{4-n} \Rightarrow 4-n \geq 0$$

$$4 \geq n$$

$$(n-4)! \Rightarrow n-4 \geq 0$$

$$n \geq 4$$

$$\Rightarrow n = 4 \text{ olmalı}$$

$$\frac{(4-4)! + 2^4}{(4+1)^2 - \sqrt{4-4}} = \frac{0! + 16}{5^2 - \sqrt{0}}$$

$$= \frac{17}{25}$$

Cevap: A

$$16. \frac{3x^2 + 7x - 6}{x-1} \cdot \frac{x^2 - 4x + 3}{x^2 - 9}$$

$$= \frac{(3x-2)(x+3)}{x-1} \cdot \frac{(x-3)(x-1)}{(x-3)(x+3)}$$

$$= 3x - 2$$

Cevap: C

$$17. f(x) = 2^{x-3} - 5$$

$$f^{-1}(11) \Rightarrow 2^{x-3} - 5 = 11$$

$$2^{x-3} = 16$$

$$2^{x-3} = 2^4$$

$$x - 3 = 4$$

$$x = 7$$

Cevap: C

$$18. \frac{x}{5} + \frac{y}{3} = 1$$

$$3x + 5y = 15$$

$$5y = 15 - 3x$$

$$f(x) = y = \frac{15-3x}{5}$$

$$f(0) + f(5) = \frac{15-0}{5} + \frac{15-15}{5} = 3$$

Cevap: E

$$19. (f \circ g^{-1})(2) = (g \circ f^{-1})(2)$$

$$\cdot \frac{f^{-1}(3x-4)}{2} = \frac{2x-1}{2}$$

$$f^{-1}(2) = 3$$

$$\cdot \frac{(g \circ f^{-1})(2)}{3} = g(3) = -2$$

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

$$g(3) = -2$$

Cevap: A

$$20. P(2x-3) = \frac{x^2-2x-15}{5} \cdot \frac{Q(x+4)+3x-2}{5}$$

$$P(7) = 0 \cdot \frac{Q(x+4)+15-2}{5}$$

$$P(7) = 13$$

Cevap: B

$$21. A \cap B = \{1, 2\}$$

$$\Rightarrow 2^{S(A \cap B)} = 2^2 = 4$$

Cevap: B

$$22. f(2^x - 2^{-x}) = (2^x - 2^{-x})^2 + 2 + 3$$

$$f(\underbrace{2^x - 2^{-x}}_3) = (\underbrace{2^x - 2^{-x}}_3)^2 + 5$$

$$f(3) = 3^2 + 5 = 14$$

Cevap: B

$$23. 2x - 3 \equiv x + 1 \pmod{11}$$

$$x \equiv 4 \pmod{11}$$

↓

4

Cevap: C

24. $x - 5 = 0 \Rightarrow x = 5$ için $A = 0 + 16 = 16$
 $x + 11 = 0 \Rightarrow x = 11$ için $A = 16 + 0 = 16$

Cevap: E

$$25. \frac{x+7}{x^2-x-2} = \frac{A}{x-2} + \frac{B}{x+1}$$

$$\frac{x+7}{x^2-x-2} = \frac{A(x+1)+B(x-2)}{x^2-x-2}$$

$$x+7 = Ax + A + Bx - 2B$$

$$x+7 = (A+B)x + A - 2B$$

$$-1/ \quad A + B = 1$$

$$A - 2B = 7$$

$$-3B = 6$$

$$B = -2 \Rightarrow A - 2 = 1$$

$$A = 3$$

$$A - B = 3 - (-2)$$

$$= 3 + 2$$

$$= 5 \text{ bulunur.}$$

$$26. \frac{9^x - 7 \cdot 3^x + 6}{3^x - 6} = 8$$

$$3^x = a \text{ olsun}$$

$$\frac{a^2 - 7a + 6}{a - 6} = 8$$

$$\frac{(a-1)(a-6)}{a-6} = 8$$

$$a - 1 = 8$$

$$a = 9$$

$$3^x = 9 = 3^2$$

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

27. $a = 2,457\overline{7}77\dots$
 $b = 2,457\overline{5}757\dots$
 $c = 2,457\overline{4}57\dots$

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

Cevap: D

$$28. 1 + \frac{1 + \frac{1}{3}}{\frac{1}{3}} = 1 + \frac{1 + \frac{4}{3}}{\frac{1}{3}}$$

$$= 1 + \frac{1 + \frac{4}{9}}{\frac{1}{3}}$$

$$= 1 + \frac{13}{9} \cdot \frac{3}{1}$$

$$= 1 + \frac{13}{3} = \frac{16}{3}$$

Cevap: B

$$29. x^2 + 4x + 4a - 2 = 0$$

$$\frac{1}{x_1} + \frac{1}{x_2} = \frac{x_2 + x_1}{x_1 \cdot x_2} = 4$$

$$\downarrow$$

$$\frac{-b}{c} = \frac{-4}{4a-2} = 4$$

$$16a - 8 = -4$$

$$16a = 4$$

$$a = \frac{4}{16} = \frac{1}{4} \text{ bulunur.}$$

Cevap: A

Cevap: C

$$30. x_1 \cdot x_2 = \frac{c}{a} = -2$$

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

$$3m+2 = -2m+2$$

$$5m = 0$$

$$m = 0 \text{ bulunur.}$$

Cevap: B

31. $(3f + 2g)(x) = 3f(x) + 2g(x)$

$$\Rightarrow 3(x^2 - 2) + 2g(x) = x^2 + 8x + 4$$

$$3x^2 - 6 + 2g(x) = x^2 + 8x + 4$$

$$2g(x) = -2x^2 + 8x + 10$$

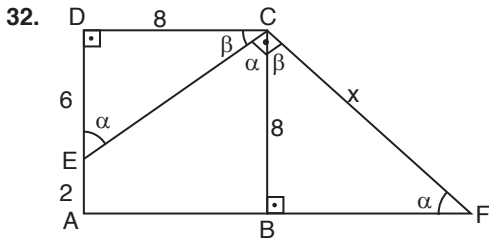
$$g(x) = -x^2 + 4x + 5$$

$$g(2) = -2^2 + 4 \cdot 2 + 5$$

$$= -4 + 8 + 5$$

$$= 9 \text{ bulunur.}$$

Cevap: D



EDC \cong FBC olduğundan $|BF| = 6$ br

$$|CF|^2 = 6^2 + 8^2 = 36 + 64 = 100$$

$|CF| = 10$ br bulunur.

Cevap: C

33. Düzgün bir beşgenin bir iç açısı;

$$m(\widehat{C}) = \frac{(5-2) \cdot 180^\circ}{5} = 108^\circ \text{ dir.}$$

DCBF dörtgeninde

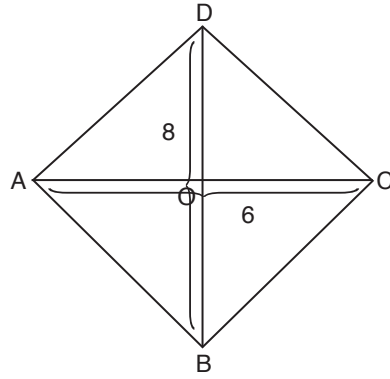
$$m(\widehat{DCB}) = m(\widehat{FDC}) + m(\widehat{F}) + m(\widehat{CBF})$$

$$108^\circ = 28^\circ + 62^\circ + x$$

$$18^\circ = x \text{ bulunur.}$$

Cevap: B

34.

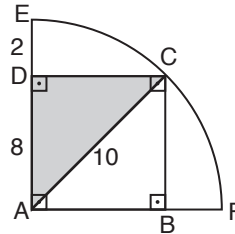


$$A(ABCD) = \frac{|AC| \cdot |BD|}{2}$$

$$= \frac{6 \cdot 8}{2} = 24 \text{ br}^2$$

Cevap: B

35.



[AC] köşegeni çizilirse çemberin yarıçapı olur.

$|AE| = |AC| = 10$ cm olur.

ADC üçgeninde pisagordan

$$|AD|^2 + |DC|^2 = |AC|^2$$

$$8^2 + |DC|^2 = 10^2$$

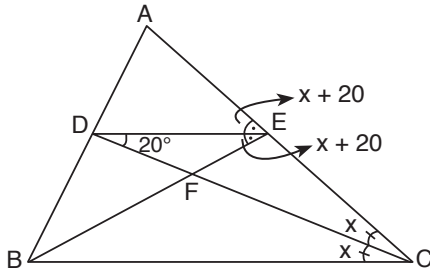
$$|DC|^2 = 100 - 64 = 36$$

$$|DC| = 6 \text{ cm}$$

$$A(ABCD) = 6 \cdot 8 = 48 \text{ cm}^2 \text{ bulunur.}$$

Cevap: D

36.



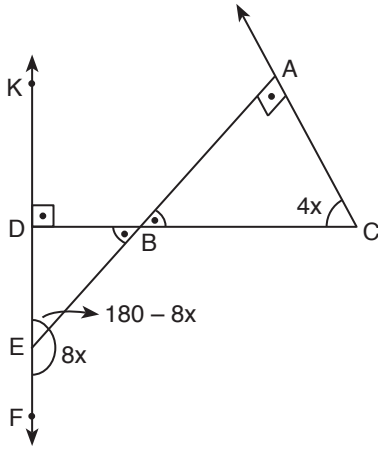
$$m(\widehat{EBC}) + 2x = m(\widehat{BEA})$$

$$m(\widehat{EBC}) + 2x = 2x + 40$$

$$m(\widehat{EBC}) = 40^\circ$$

Cevap: C

37.



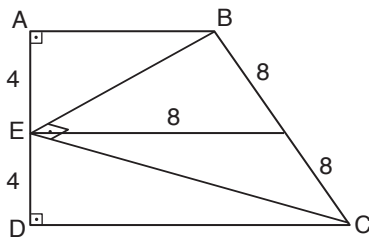
$$\Rightarrow 180 - 8x + 90 = 90 + 4x$$

$$180 = 12x$$

$$x = 15$$

Cevap: B

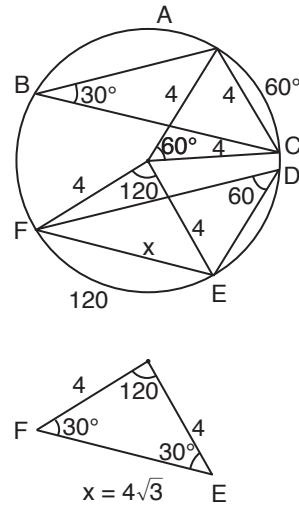
38.



$$A(EBC) = \frac{8 \cdot 8}{2} = 32$$

Cevap: D

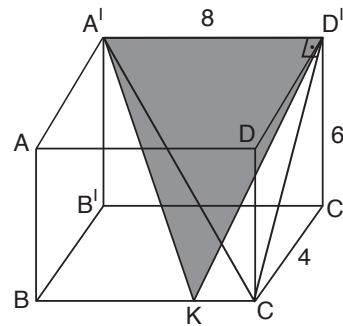
39.



Cevap: E

TASARI EĞİTİM YAYINLARI

40.



$$\bullet A(A'D'K) = A(A'CD')$$

$$\bullet 4^2 + 6^2 = |D'C|^2 \Rightarrow |D'C| = 2\sqrt{13}$$

$$\Rightarrow A(A'CD') = \frac{2\sqrt{13} \cdot 8}{2} = 8\sqrt{13}$$

Cevap: A

41. SEZGİ
ZESEK
SORGU
ZERGİ
ZERİK
- kelimelerdeki ZE ifadesinden sayılardaki 72'ye denk gelmektedir.

$$Z = 7 \text{ ve } E = 2$$

ZESEK → 72324'e karşılık gelir.

$$S = 3 \text{ ve } K = 4$$

ZERİK → 72804

$$R = 8 \text{ ve } İ = 0$$

ZERGİ → 72890 bulunur.

Cevap: D

42. SEKA
RECİ
ERİK
CARI
- Son harflerden
İ = 4

ERİK → 1549 E = 1, R = 5 ve K = 9

SEKA → 3192 S = 3, A = 2

RECİ → 5164 C = 6

O halde

KACE → 9261

Cevap: E

43. $m \Delta n = 7m - 3n - 5$

$$x \Delta x = x$$

$$7x - 3x - 5 = x$$

$$3x = 5$$

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

Cevap: A

44. $x \square y = 2x^2 + 4y$
 $[2 \square (-1)] \square a = 0$

$$2 \cdot 2^2 + 4 \cdot (-1)$$

$$8 - 4 = 4$$

$$4 \square a = 0$$

$$2 \cdot 4^2 + 4 \cdot a = 0$$

$$32 + 4a = 0$$

$$4a = -32 \Rightarrow a = -8$$

Cevap: B

45. Tabloya göre

$$c \cdot d = 12, \quad a^c = 8, \quad a = 2, \quad d^b = 16$$

$$a \cdot b = ? \quad 2^c = 2^3$$

$$\boxed{c = 3}$$

$$3 \cdot d = 12 \text{ ve } 4^b = 4^2$$

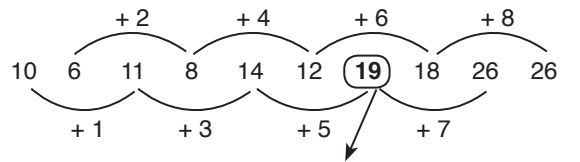
$$\boxed{d = 4}$$

$$\boxed{b = 2}$$

$$a \cdot b = 2 \cdot 2 = 4$$

Cevap: D

- 46.



Cevap: E

47. $34826 \rightarrow 4388 \rightarrow \boxed{3416} \rightarrow 437 \rightarrow 410 \rightarrow 41 \rightarrow 5$

Cevap: C

$$48. 895 \rightarrow \frac{8+9+5}{2} = 11$$

$$592 \rightarrow \frac{5+9+2}{2} = 8$$

$$927 \rightarrow \frac{9+2+7}{2} = 9$$

$$781 \rightarrow \frac{7+8+1}{2} = 8$$

$$723 \rightarrow \frac{7+2+3}{2} = 6 \text{ bulunur.}$$

Cevap: E

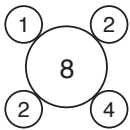
$$49. 17 + 8 = \sqrt{25} \rightarrow 25 = 5$$

$$23 + 26 = \sqrt{49} \rightarrow 49 = 7$$

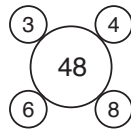
$$58 + 63 = \sqrt{121} \rightarrow 121 = 11 \text{ bulunur.}$$

Cevap: D

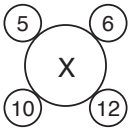
50.



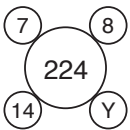
$$(1.4) + (2.2) = 8$$



$$(3.8) + (6.4) = 48$$



$$\begin{aligned} \rightarrow x &= (5.12) + (6.10) \\ &= 60 + 60 \\ x &= 120 \end{aligned}$$



$$224 = (7.y) + (14.8)$$

$$224 = 7y + 112$$

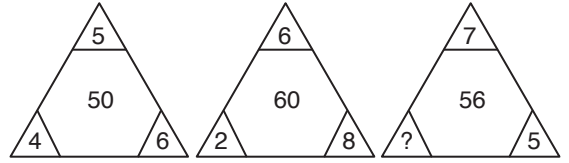
$$112 = 7y$$

$$16 = y$$

$$\text{O halde } x + y = 120 + 16 = 136$$

Cevap: B

51.



$$(4 + 6).5 = 50$$

$$(2 + 8).6 = 60$$

$$(? + 5).7 = 56$$

$$? + 5 = 8$$

$$? = 3$$

Cevap: C

52.

a^1	a^2	a^3
1	1	1
2	4	8
3	9	?

$$a^1 = 1^1 = 1 \quad 1^2 = 1 \quad 1^3 = 1$$

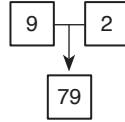
$$\rightarrow a^1 = 2^1 = 2 \quad 2^2 = 4 \quad 2^3 = 8$$

$$a = 3^1 = 3 \quad 3^2 = 9 \quad 3^3 = 27$$

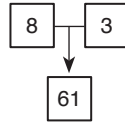
Cevap: E

TASARI EĞİTİM YAYINLARI

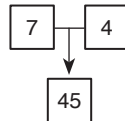
53.



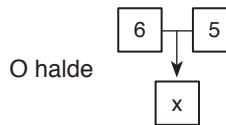
$$\rightarrow 9^2 - 2 = 81 - 2 = 79$$



$$\rightarrow 8^2 - 3 = 64 - 3 = 61$$



$$\rightarrow 7^2 - 4 = 49 - 4 = 45$$



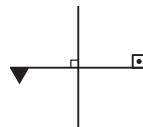
O halde

$$\rightarrow 6^2 - 5 = 36 - 5$$

$$x = 31 \text{ bulunur.}$$

Cevap: B

54.



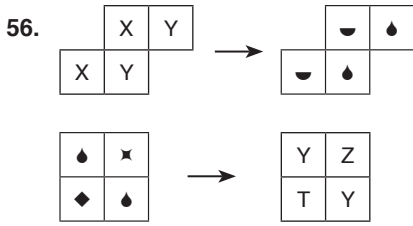
Cevap: E



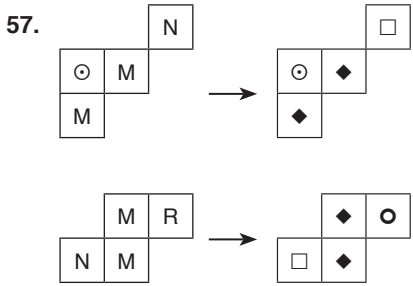
O halde



Cevap: E

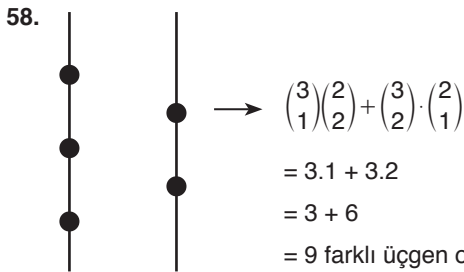


Cevap: E



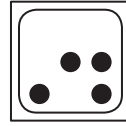
R → ○

Cevap: A



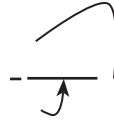
Cevap: B

59. ● → üstten bir azaltılarak ilerliyor.

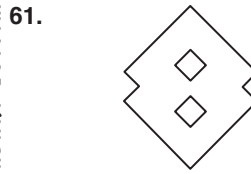


Cevap: B

60. Şekillerin toparlanması ile oluşan şekli tamamlayın



Cevap: A



Cevap: B

62. ▲ → a ● → b ■ → c

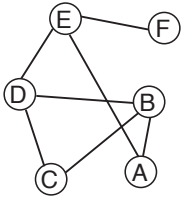
I.	II.	III.
$2a + b = a + 3b$	$c = a + b$	$c + a = 3b + 2b$
$a = 2b$	$c = 3b$	$= 5b$

- A) $b + b + b + b = 4b$
 B) $b + 2b + 2b + 2b = 7b$
 C) $2b + 2b + b + b = 6b$
 D) $b + 3b + 3b = 7b$
 E) $2b + 2b + b = 5b$

Cevap: E

63. $64 \rightarrow 6^2 + 4^2 = 36 + 16 = 52$
 $73 \rightarrow 7^2 + 3^2 = 49 + 9 = 58$
 $82 \rightarrow 8^2 + 2^2 = 64 + 4 = 68$
 $91 \rightarrow 9^2 + 1^2 = 81 + 1 = 82$
 $58 \rightarrow 5^2 + 8^2 = 25 + 64 = 89$

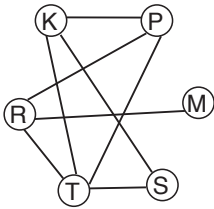
64.



$$X = B$$

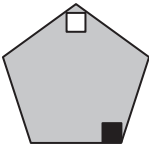
$$Y = C$$

65.



$$X = K \quad Y = P$$

66. Şekli sağ tarafında simetrisi alınınca



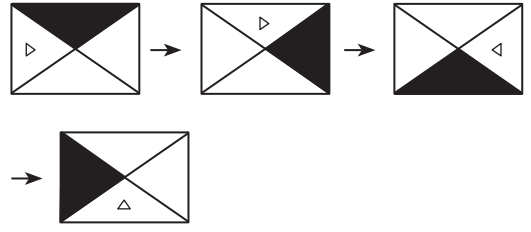
Cevap: E

Cevap: A

Cevap: A

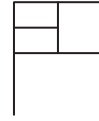
Cevap: A

67.



Cevap: C

68.

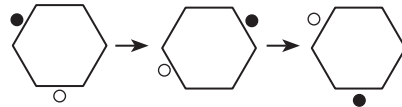


Şekiller sol dilime kaymakta

Cevap: C

69.

- → 2 kenar
- → 1 kenar ilerlemekte



Cevap: E

70.

- Üst parça 45°
- Alt parça 90° ilerlemekte



Cevap: C

71. I. tablo

$$b + c = 16$$

II. tablo

$$a \cdot c = 12$$

$$b \cdot a = 20$$

$$a(b + c) = 32$$

$$16$$

$$a = 2$$

$$\Rightarrow 2 \cdot b = 20$$

$$b = 10$$

$$a + b = 2 + 10 = 12$$

Cevap: C

72. Tablodan

$$a \cdot b = 4c$$

$$x \cdot b \cdot c = 9a$$

$$\cancel{a} \cdot b^2 \cdot \cancel{c} = 4 \cdot \cancel{c} \cdot 9 \cdot \cancel{a}$$

$$b^2 = 36$$

$$b = 6$$

Cevap: B

73.

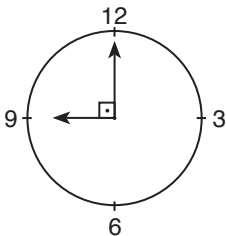
8	10
16	

1. satır $\xrightarrow{+5}$ 2. satır $\xrightarrow{+8}$ 3. satır $\xrightarrow{+5}$ 4. satır

Cevap: A

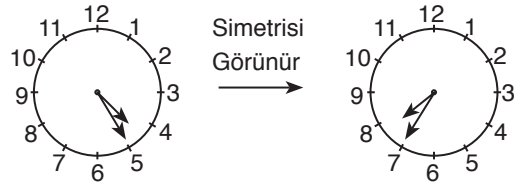
74. 09.00 \rightarrow 08.60

$$\alpha = \left| \frac{11.60 - 60.8}{2} \right| = 90^\circ$$



Cevap: C

75.



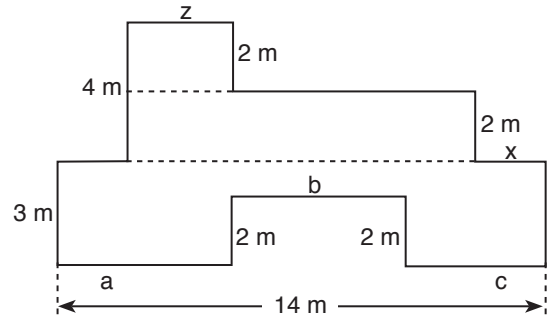
23.60

16.25

07.35 olarak görünür.

Cevap: D

76.



Cevap: B

$$a + b + c = 14 \text{ m} \quad \text{ve} \quad x + y + z + t = 14 \text{ m}$$

$$3\text{m} + 4\text{m} + 2\text{m} + 2\text{m} + 3\text{m} + 2\text{m} + 2\text{m} = 18\text{m}$$

$$14\text{m} + 14\text{m} + 18\text{m} = 46\text{m}$$

Cevap: D

73.

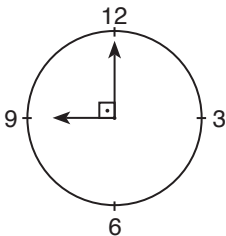
8	10
16	

1. satır $\xrightarrow{+5}$ 2. satır $\xrightarrow{+8}$ 3. satır $\xrightarrow{+5}$ 4. satır

Cevap: A

74. 09.00 \rightarrow 08.60

$$\alpha = \left| \frac{11.60 - 60.8}{2} \right| = 90^\circ$$



Cevap: C

77. Üç yüzü boyalı sadece köşeler \rightarrow 8 tamİki yüzü boyalı köşeler hariç \rightarrow 12.3 = 36 tane

Kenarlar

Kenar

sayısı

Bir kenardaki

2 yüzü boyalı

Bir yüzü boyalı 9.6 = 54 tane

Bir yüzeydeki

bir yüzü boyalıları

yüzey

sayısı





Boyasız ise $125 - (54 + 36 + 8) = 27$

Cevap: A

78.  → 48 adet

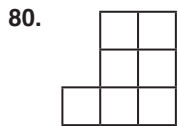
Cevap: C

79.

B	X	C	+	D	→ 33
X		÷		÷	
7	+	2	X	A	→ 13
-		-		+	
L		K	-	E	→ 3
↓		↓		↓	
20		2		8	

$$\begin{aligned}
 E^2 - C + D &= 5^2 - 6 + 9 \\
 &= 25 - 6 + 9 \\
 &= 28 \text{ bulunur.}
 \end{aligned}$$

Cevap: E



Cevap: C