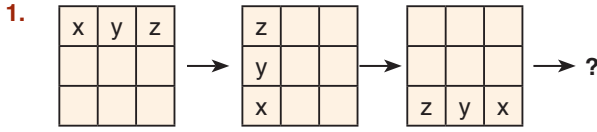


Bu testte cevaplayacağınız toplam soru sayısı 80'dir.



		x
		y
		z

x iki kare ilerlemekte, (saat yönü tersi)

y çapraz kare ilerlemekte

z soldan iki kare ilerlemekte (saat yönü tersi)

Cevap: B

2. $1 \Delta 2 = 1 \rightarrow 1^2 = 1$
 $2 \Delta 4 = 16 \rightarrow 2^4 = 16$
 $3 \Delta 3 = 27 \rightarrow 3^3 = 27$
 $5 \Delta 2 = ? \rightarrow 5^2 = 25$ bulunur.

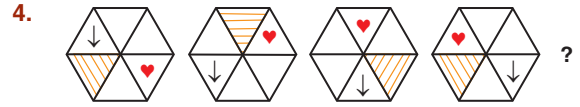
Cevap: A

3.

A2K	C3M	B1L
B3L	A1K	C2M
C1M	B2L	?

- * B1L, B2L, B3L
- * C1M, C2M, C3M
- * A1K, A2K, A3K olur.

Cevap: D



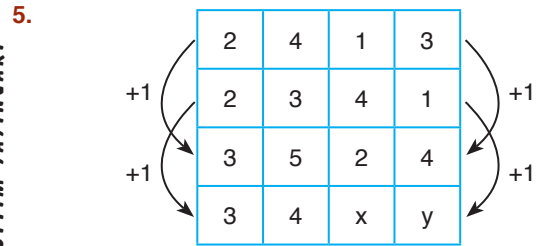
$\uparrow \rightarrow$ Soldan bir dilim ilerlemekte

\rightarrow Sağdan iki dilim ilerlemekte

\rightarrow Sola doğru bir dilim ilerlemekte



Cevap: C



I. satır III. satırın bir fazlası

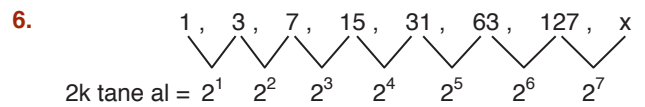
II. satır IV satırın bir fazlası

$$x = 4 + 1 = 5$$

$$y = 1 + 1 = 2$$

$$x + y = 5 + 2 = 7$$
 bulunur.

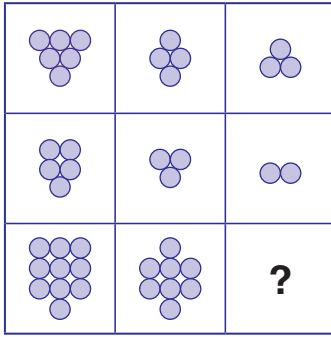
Cevap: C



$$x = 127 + 2^7 = 127 + 128 = 255$$
 bulunur.

Cevap: B

7.



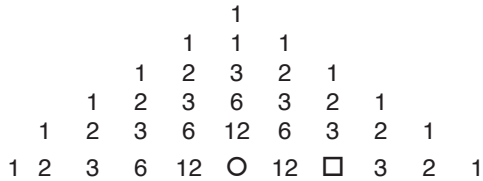
I. adım üstten 2 daire alınıyor.

II. adım alttan 1 daire alınıyor.



Cevap: A

8.

1 2 3 6 12 24 12 6 3 2 1

Soldan veya sağdan toplanarak ilerliyor.

 $1 + 2 + 3 + 6 + 12 = 24$, $1 + 2 + 3 = 6$

Cevap: D

9.

I. $\square \cdot \square + * = 17$ II. $\nabla \div * = \nabla$ III. $\square - \nabla = *$ IV. $\square + \nabla + * = ?$ $\square \rightarrow 4$ $\nabla \rightarrow 3$ $* \rightarrow 1$ 'i temsil etmekte $\square + \nabla + * = 4 + 3 + 1 = 8$

Cevap: E

10. $f(AB) = A.B + A + B$ 'dir. $AB = 94$ ve $AB = 49$ olmalı

$$= 9.4 + 9 + 4$$

$$= 36 + 13$$

$$= 49 \text{ olur.}$$

 $A.B = 9.4 = 36$ bulunur.

Cevap: E

11.

2	+	A	X	B	$\rightarrow 14$
X		+		+	
5	X	6	+	C	$\rightarrow 38$
+		-		\div	
E	-	7	\div	D	$\rightarrow 2$
\downarrow		\downarrow		\downarrow	
19		3		11	

A = 4

B = 3

C = 8

D = 1

E = 9

B = 3 bulunur.

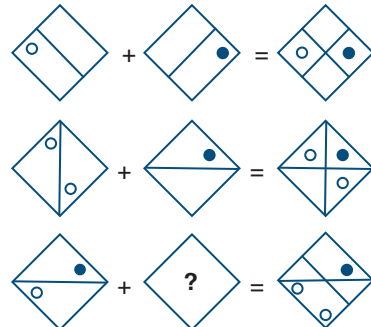
Cevap: B

12.

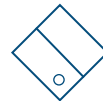
$$\frac{C.B}{A} - E + D = \frac{8.3}{4} - 9 + 1 = -2$$

Cevap: A

13.



İki şekil üst üste konulmakta



Cevap: B

14. İçteki karenin bir kenarı alınıp dışarıya eklenmekte



Cevap: A

15. Kelimelerin sonundaki I iki tane sayılarda bu I = 5 olur.

Kelimelerin başlangıcında A iki tane sayılarda bu A = 2 olur.

ISKA → 5312 S = 3 ve K = 1
SALI → 3265 L = 6
KALE → 1264 E = 4
ASKI → 2315
AKIL → 2156 bulunur.

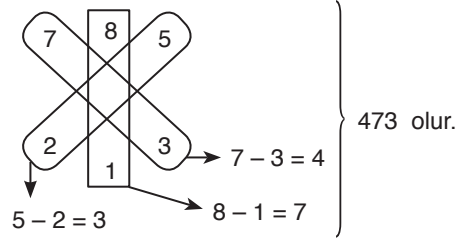
Cevap: C

16. Kelimelerin sonundaki İ harfinden İ = 1 olduğunu görüyoruz.

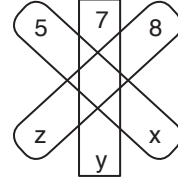
İZBE → 1234 Z = 2, B = 3 ve E = 7
ZEKİ → 2781 K = 8
ERİK → 7918 R = 9
RİZE → 9127
BERK → 3798

Cevap: E

17.



O halde



$$5 - x = 4 \Rightarrow x = 1$$

$$7 - y = 5 \Rightarrow y = 2$$

$$8 - z = 7 \Rightarrow z = 1$$

? = 121 bulunur.

Cevap: A

18.

$$a \odot b = 2a.b - 2.(a \odot b) + 1$$

$$3(a \odot b) = 2a.b + 1$$

$$a \odot b = \frac{2ab + 1}{3}$$

$$5 \odot 2 = \frac{2.5.2 + 1}{3} = \frac{21}{3} = 7 \text{ bulunur.}$$

Cevap: D

19.

$$a \star b = \begin{cases} a - 3b & a < b \\ 2ab - 1 & b \leq a \end{cases}$$

$$[(-1) \star (1)] \star (-5) = ?$$

$$(-1) \star 1 = a - 3b = -1 - 3.1 = -4$$

$$a < b$$

$$(-4) \star (-5) = 2ab - 1 = 2.(-4).(-5) - 1$$

$$b < a = 40 - 1$$

$$= 39$$

Cevap: A

20. 1. satır + 3. satır = $17 + 43 = 60$
 2. satır + 4. satır = $25 + 35 = 60$
 $19 + 4 = 60$
 $27 + 33 = 60$

O halde

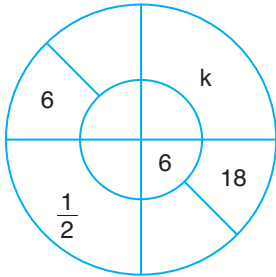
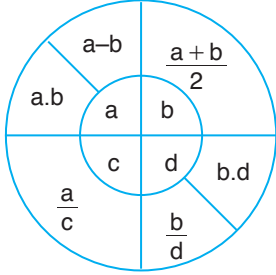
$$37 + 23 = 60$$

$$44 + K = 60 \Rightarrow K = 60 - 44$$

$$K = 16 \text{ bulunur.}$$

Cevap: B

21.



$$a.b = 6$$

$$\frac{a}{c} = \frac{1}{2}$$

$$d = 6$$

$$b.d = 18 \Rightarrow b = 3 \text{ olur.}$$

$$a.3 = 6 \Rightarrow a = 2$$

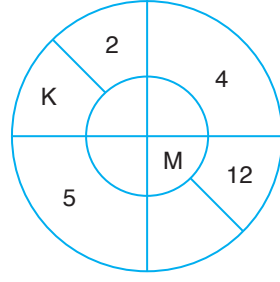
$$\frac{2}{c} = \frac{1}{2} \Rightarrow c = 4$$

O halde $\frac{a+b}{2} = k$

$$\frac{2+3}{2} = \frac{5}{2} \text{ bulunur.}$$

Cevap: E

22.



$$\frac{a}{c} = 5$$

$$a - b = 2$$

$$\frac{a+b}{2} = 4$$

$$b.d = 12$$

$$a - b = 2$$

$$a + b = 8$$

$$2a = 10$$

$$a = 5 \text{ olur.}$$

$$b = 3 \text{ bulunur.}$$

$$K = a.b = 5.3 = 15, \quad M = d = 4$$

$$K + M = 15 + 4 = 19 \text{ bulunur.}$$

$$K = a.b$$

$$M = d$$

$$\frac{a}{c} = \frac{5}{c} = 5 \Rightarrow c = 1$$

$$3.d = 12 \Rightarrow d = 4$$

Cevap: D

23.



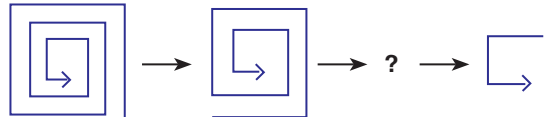
Noktalar saat yönünde bir adım ilerliyor.

Yan küçük yapraklar her adımda bir eksiliyor.



Cevap: C

24.



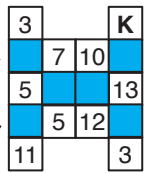
Her adımda 3 kenar siliniyor.



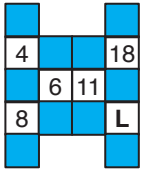
Cevap: B

25. • $1^2 + 3^2 + 5^2$
 $1 + 9 + 25 + \textcircled{9} = 44$
 • $4^2 + 2^2 + 7^2$
 $16 + 4 + 49 + 11 = 80$
 • $8^2 + 6^2 + 0^2$
 $64 + 36 + 0 + 13 = 113$
 • $9^2 + 2^2 + 5^2$
 $81 + 4 + 25 + 15 = 125$

Cevap: C

26. 

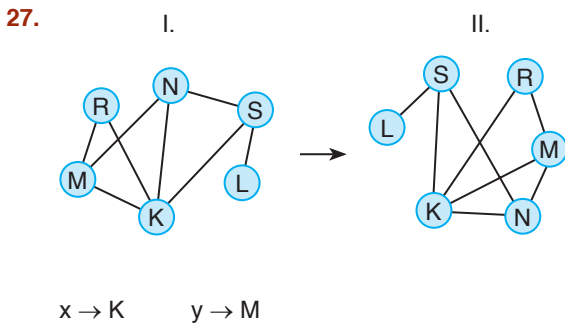
$\frac{3+5}{2} = 4$ $\frac{K+13}{2} = 18 \Rightarrow K = 23$
 $\frac{5+11}{2} = 8$ $\frac{13+3}{2} = 8$



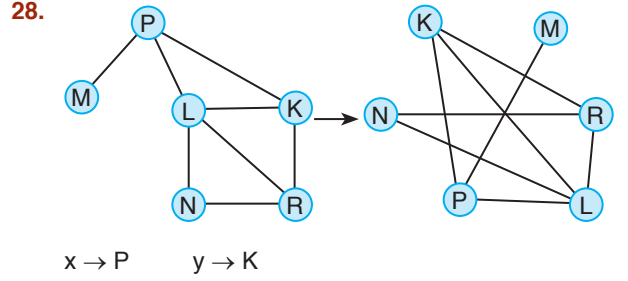
$\frac{18+L}{2} = 13$
 $18 + L = 26$
 $L = 8$

$\Rightarrow K + L = 23 + 8 = 31$

Cevap: D



Cevap: B



Cevap: B

29. I. $\left. \begin{array}{l} \oplus \cup \times \\ \square \oplus \times \\ \cup \square \nabla \\ \cup \times \square \\ \oplus \nabla \oplus \end{array} \right\} \Rightarrow \left\{ \begin{array}{l} 579 \\ 742 \\ 527 \\ 494 \\ 452 \end{array} \right.$ II.

Sağdaki iki şekil aynı \times , soldaki farklı şekil \square

- $\times \rightarrow 2$
 $\square \rightarrow 7$ buradan
 $\oplus \cup \times \rightarrow 742$ $\oplus \rightarrow 4$
 $\oplus \nabla \oplus \rightarrow 494$ $\nabla \rightarrow 9$
 $\cup \times \square \rightarrow 527$ $\cup \rightarrow 5$
 O halde
 $\cup \square \nabla \rightarrow 579$

Cevap: C

30. I. $\left. \begin{array}{l} \heartsuit \circ \boxtimes \uparrow \\ \square \smile \heartsuit \boxtimes \\ \boxtimes \circ \smile \square \\ \uparrow \boxtimes \smile \heartsuit \\ \circ \smile \square \uparrow \end{array} \right\} \Rightarrow \left\{ \begin{array}{l} 2347 \\ 7532 \\ 9734 \\ 5329 \\ 4579 \end{array} \right.$ II.

- Solda \uparrow iki tane $\uparrow \rightarrow 9$ buradan
 • $\uparrow \boxtimes \smile \heartsuit \rightarrow 9734$
 $\boxtimes \rightarrow 7, \smile \rightarrow 3, \heartsuit \rightarrow 4$
 • $\heartsuit \circ \boxtimes \uparrow \rightarrow 4579$
 $\circ \rightarrow 5$
 • $\circ \smile \square \uparrow \rightarrow 5329$
 $\square \rightarrow 2$
 $\boxtimes \circ \smile \square \rightarrow 7532$

Cevap: D

31.

+	a	b	c
a			23
b	5c		
c		33	

$$a + c = 23$$

$$b + a = 5c$$

$$c + b = 33 \text{ ifadelerinden}$$

$$\begin{array}{r} a + c = 23 \\ + \quad c + b = 33 \\ \hline a + b + 2c = 56 \\ \quad \quad \quad \underline{5c} \end{array}$$

$$7c = 56$$

$$\boxed{c = 8}$$

$$a + 8 = 23$$

$$a = 15 \text{ bulunur.}$$

Cevap: D

32.

x	a	b
a	2b+1	
b		b+12

$$a, b \in \mathbb{Z}^+$$

$$a \cdot a = 2b + 1$$

ve

$$b \cdot b = b + 12$$

$$a^2 = 2b + 1$$

$$b^2 = b + 12$$

$$b^2 - b - 12 = 0$$

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

$$b = 4 \quad b = -3$$

O halde

$$a^2 = 2 \cdot 4 + 1$$

$$a^2 = 9$$

$$a = 3$$

Cevap: C

33.

+	a	b	c
a			
b			2a
c			

$$b + c = 2a$$

$$b + c = 2a = 2 \cdot 11 = 22$$

$$= 9$$

x	a	b	c
a		143	
b			
c		117	

$$a \cdot b = 143 = 11 \cdot 13$$

$$c \cdot b = 117 = 9 \cdot 13$$

$$b = 13, a = 11 \text{ ve } c$$

$$b - c = 13 - 9$$

$$= 4 \text{ olur.}$$

Cevap: B

34.

$$\blacksquare = a \quad \blacktriangle = b \quad \bullet = c \quad \blacklozenge = d \quad 2d = ?$$

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

$$d + a = 5b$$

$$d + d - b - c = 5b$$

$$2d = 6b + c$$

$$\blacktriangle \blacktriangle \blacktriangle \blacktriangle \blacktriangle \blacktriangle \bullet$$

Cevap: B

35.

$$\begin{array}{|c|} \hline 3 \\ \hline 8 \\ \hline \end{array} \overset{5}{\curvearrowright} \rightarrow 5^{3 \cdot 8}$$

$$\begin{array}{|c|} \hline 3 \\ \hline 4 \\ \hline \end{array} \overset{6}{\curvearrowright} \rightarrow 3^{6 \cdot 4}$$

$$\begin{array}{|c|} \hline x \\ \hline 12 \\ \hline \end{array} \overset{15}{\curvearrowright} \rightarrow 15^{x \cdot 12}$$

$$5^{24} \cdot 3^{24} = 15^{x \cdot 12}$$

$$15^{24} = 15^{x \cdot 12} \Rightarrow 12 \cdot x = 24$$

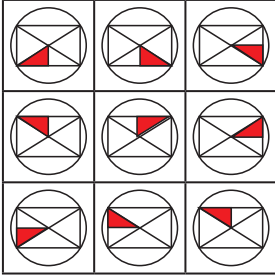
$$x = 2 \text{ bulunur.}$$

Cevap: B

36. • $(9 + 5).(9 - 5)$
= 14.4
= 56
- $(16 + 11).(16 - 5)$
= 27.11
= 294
- $(21 + 19).(21 - 19)$
= 40.2
= 80
- $(25 + 22).(25 - 22)$
= 47.3
= 141 bulunur.

Cevap: D

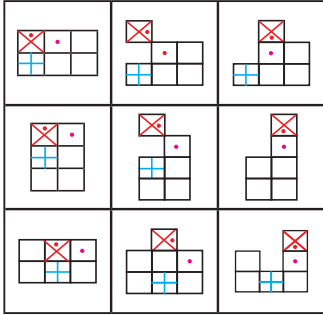
37.



Siyah üçgen sağa doğru bir adım ilerlemekte.

Cevap: B

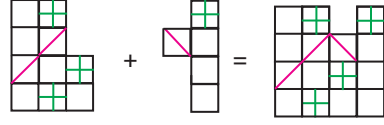
38.



39. A seçeneği azalan bir fonksiyon
Diğer seçenekler artan fonksiyon

Cevap: A

40. İki şekil birleştiriliyor.



Cevap: A

41.

$$\frac{\frac{1}{6} - \left(\frac{1}{2} - \frac{1}{9}\right)}{\frac{(3)}{(9)} - \frac{(2)}{(3)}} = \frac{3 - 9 + 2}{18} = \frac{-8}{18} = -\frac{4}{9}$$

$$= -\frac{4}{18} \cdot \frac{3}{-8} = \frac{1}{12}$$

Cevap: A

42.

$$\begin{array}{r} 444 \\ \times 23 \\ \hline 1332 \\ + 888 \\ \hline 10212 \end{array}$$

$$\rightarrow A + B + C = 4 + 2 + 3 = 9$$

Cevap: C

Cevap: E

43. $\sqrt{7 - \frac{3}{4}} - \sqrt{12 + \frac{1}{4}}$

$$= \sqrt{\frac{25}{4}} - \sqrt{\frac{49}{4}}$$

$$= \frac{5}{2} - \frac{7}{2}$$

$$= \frac{5-7}{2} = \frac{-2}{2} = -1$$

Cevap: B

44. $a \neq b$

$2^a = 3^b$

$$8^{\frac{a+b}{b}} + 9^{\frac{a+b}{a}} = 8^{\frac{a}{b}} \cdot 8^{\frac{b}{b}} + 9^{\frac{a}{a}} \cdot 9^{\frac{b}{a}}$$

$$= \left(2^{\frac{a}{b}}\right)^3 \cdot 8 + 9 \cdot \left(3^{\frac{b}{a}}\right)^2$$

I. $2^{\frac{a}{a}} = 3^{\frac{b}{a}}$

II. $2^{\frac{a}{b}} = 3^{\frac{b}{b}}$
 $2^{\frac{a}{b}} = 3$

$$= (3)^3 \cdot 8 + 9 \cdot (2)^2$$

$$= 27 \cdot 8 + 9 \cdot 4$$

$$= 216 + 36$$

$$= 252$$

Cevap: E

45. $\frac{81 \cdot 16^x + 4}{9 \cdot 4^x} = \frac{81 \cdot 16^x}{9 \cdot 4^x} + \frac{4}{9 \cdot 4^x}$

$$= 9 \cdot 2^{2x} + \frac{4}{9 \cdot 2^{2x}}$$

$$\cdot \left(3 \cdot 2^x - \frac{2}{3 \cdot 2^x}\right)^2 = (6)^2$$

$$9 \cdot 2^{2x} + \frac{4}{9 \cdot 2^{2x}} - 4 = 36$$

$$9 \cdot 2^{2x} + \frac{4}{9 \cdot 2^{2x}} = 40 \text{ bulunur.}$$

Cevap: D

46. $2x - y + z = 15$

$x - y - z = 0$

$+ \quad x + 2y = 13$

$$4x = 28$$

$$x = 7$$

Cevap: B

47. $f(x) = x^2 + 4x + 4 - 4$

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

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

$\sqrt{y + 4} = x + 2$

$\sqrt{y + 4} - 2 = x$

$f^{-1}(x) = \sqrt{x + 4} - 2$

$$\Rightarrow (f^{-1}(x) + 2)^2 = (\sqrt{x + 4} - 2 + 2)^2$$
$$= x + 4$$

Cevap: C

48. $3x^2 - 9x + 5 = 0$

$$\frac{1}{x_1} + \frac{1}{x_2} = \frac{x_2 + x_1}{x_1 \cdot x_2} = \frac{-b}{a} = \frac{-b}{c}$$

$a = 3 \quad b = -9 \quad c = 5$

$O \text{ halde } \frac{-b}{c} = \frac{-(-9)}{5} = \frac{9}{5} \text{ bulunur.}$

Cevap: D

49. $\frac{a^3 - b^3}{a^2 - b^2} \cdot \frac{a^2 + ab + b^2}{\frac{1}{a} + \frac{1}{b}}$

$$\frac{(a - b) \cdot (a^2 + ab + b^2)}{(a - b)(a + b)} \cdot \frac{a^2 + ab + b^2}{\frac{a + b}{a \cdot b}}$$

$$\frac{\cancel{(a - b)} \cdot (\cancel{a^2 + ab + b^2})}{\cancel{(a - b)}(a + b)} \cdot \frac{(a + b)}{a \cdot b(\cancel{a^2 + ab + b^2})}$$

$$= \frac{1}{a \cdot b} \text{ bulunur.}$$

Cevap: D

50. $Q(x) = k \Rightarrow P(k) = 9$ olur.

$$P(k) + Q(k) = 2k^2 + 3$$

$$9 + k = 2k^2 + 3$$

$$2k^2 - k - 6 = 0$$

$$(2k + 3)(k - 2) = 0$$

$$2k + 3 = 0 \text{ ve } k - 2 = 0$$

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

bunların toplamı $\sum k$

$$\frac{-3}{2} + 2 = \frac{1}{2} \text{ bulunur.}$$

Cevap: D

51. $6 < x < 10 \Rightarrow 28 < x \cdot y < 36$

$$\begin{array}{ccc} \downarrow & & \downarrow \downarrow \\ 7 & & 7 \cdot 5 \end{array}$$

$$\Rightarrow x + y = 7 + 5 = 12$$

52. $A = \{x \mid x < 99, \quad x = 3k, \quad k \in \mathbb{N}\}$

$$A = \{3, 6, 9, \dots, 96\}$$

$$B = \{y \mid 17 < y < 107, \quad y = 4k, \quad k \in \mathbb{N}\}$$

$$B = \{20, 24, 28, \dots, 104\}$$

$$s(A \cap B) = \{24, 36, 48, \dots, 96\}$$

$$T.S = \frac{96 - 24}{12} + 1 = \frac{72}{12} + 1$$

$$= 6 + 1$$

$$= 7$$

Cevap: E

$$53. \quad \frac{15! + 14!}{(n+7)} = \frac{(n+6)!}{15}$$

$$\frac{14!(15+1)}{(n+7)} = \frac{(n+6)!}{15}$$

$$15 \cdot 14! \cdot 16 = (n+7)(n+6)!$$

$$16! = (n+7)!$$

$$n+7 = 16$$

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

Cevap: D

$$54. \quad x = \sqrt{14 + 6\sqrt{5}}$$

$$\begin{array}{c} \wedge \\ 3 \cdot 2 \end{array}$$

$$x = \sqrt{14 + 2\sqrt{45}}$$

$$\begin{array}{c} \wedge \\ 9 \cdot 5 \end{array}$$

$$x = \sqrt{9} + \sqrt{5} = 3 + \sqrt{5}$$

$$\cdot \quad y = 6 - 2\sqrt{5} = 2(3 - \sqrt{5})$$

$$x \cdot y = 2 \cdot (3 + \sqrt{5})(3 - \sqrt{5})$$

$$= 2 \cdot (9 - 5)$$

$$= 8 \text{ bulunur.}$$

Cevap: E

Cevap: A

$$55. \quad (2x + 1)^4 = Ax^4 + Bx^3 + Cx^2 + Dx + E$$

$$= (2x)^4 + 4 \cdot (2x)^3 + 6 \cdot (2x)^2 + 4 \cdot (2x) + 1$$

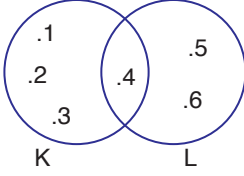
$$= 16x^4 + 32x^3 + 24x^2 + 8x + 1$$

$$A = 16, \quad B = 32, \quad C = 24, \quad D = 8, \quad E = 1$$

$$A + C + E = 16 + 24 + 1 = 41$$

Cevap: A

56.



$$(K \setminus L) \cup (K \cap L)$$



$$\{1, 2, 3\} \cup \{4\} = \{1, 2, 3, 4\} = K$$

Cevap: B

$$57. 3^x = a \Rightarrow a = 3^3 \text{ olmalı}$$

$$x = 3$$

$$f(3^3) = \frac{4^3 + 1}{5} = \frac{64 + 1}{5} = 13$$

O halde

$$f\left(\frac{a}{81}\right) = f\left(\frac{27}{81}\right) = f\left(\frac{1}{3}\right) = f(3^{-1})$$

$$f(3^{-1}) = \frac{4^{-1} + 1}{5} = \frac{\frac{1}{4} + 1}{5} = \frac{\frac{5}{4}}{5} = \frac{1}{4} \text{ bulunur.}$$

Cevap: A

$$58. \frac{3x+5}{x^2} - 1 = \frac{A}{x-1} + \frac{B}{x+1}$$

$$\frac{3x+5}{x^2-1} = \frac{Ax+A+Bx-B}{x^2-1}$$

$$3x+5 = (A+B)x + A-B$$

$$A+B=3$$

$$+ \quad A-B=5$$

$$2A=8 \Rightarrow A=4$$

$$A+B=3 \Rightarrow B=-1 \text{ dir.}$$

$$\underbrace{4}$$

$$A.B = 4.(-1) = -4 \text{ bulunur.}$$

Cevap: B

$$59. \text{ i) } 1000A + 100B + 10C + D - 100C - 10B - D = 3180$$

$$1000A + 90B - 90C = 3180$$

$$\text{ii) } 1000A + 100B + 10 + D - 10B - D = 3370$$

$$1000A + 90B = 3360$$

i ve ii'den

$$3360 - 90C = 3180$$

$$180 = 90C$$

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

Cevap: B

$$60. 0 < x < 1 \Rightarrow x = \frac{1}{2} \text{ olabilir.}$$

$$a = 21\sqrt{x^{5.21}} \quad b = 14.3\sqrt{x^{7.14}} \quad c = 6.7\sqrt{x^{15.6}}$$

$$a = 42\sqrt{x^{105}} \quad b = 42\sqrt{x^{98}} \quad c = 42\sqrt{x^{90}}$$

Pozitif basit kesirli ifadelerde kuvvet büyüdükçe ifade küçülür. O halde.

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

Cevap: A

$$61. x^2 - 2x - 1 = 0 \Rightarrow x^2 = 2x + 1$$

x^2 gördüğümüz her yere $2x + 1$ yazarak kalanı bulabiliriz.

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

$$= (x^2)^2 + 3x^2 \cdot x + x^2 + 5x + a - 3$$

$$= (2x+1)^2 + 3(2x+1) \cdot x + x^2 + 5x + a - 3$$

$$= 4x^2 + 4x + 1 + 6x^2 + 3x + 2x + 1 + 5x + a - 3$$

$$= 10x^2 + 14x + a - 1$$

$$= 20x + 10 + 14x + a - 1$$

$$= 34x + a + 9$$

$$bx + 14 = 34x + a + 9 \text{ ise } a + 9 = 14 \Rightarrow a = 5$$

$$b = 34$$

$$b - a = 34 - 5 = 29 \text{ bulunur.}$$

Cevap: A

$$\begin{aligned}
62. & \left(\frac{10^9 - 10^8}{3 \cdot 10^4} \right) \cdot \left(\frac{10^{-14} + 10^{-15}}{(1,1) \cdot 10^{-19}} \right) \\
&= \frac{10^8(10-1)}{3 \cdot 10^4} \cdot \frac{10^{-15}(10+1)}{11 \cdot 10^{-20}} \\
&= 3 \cdot 10^4 \cdot \frac{1}{10^{-5}} = 3 \cdot 10^4 \cdot 10^5 \\
&= 3 \cdot 10^9 \text{ bulunur.}
\end{aligned}$$

Cevap: C

$$\begin{aligned}
63. & A = 4 + 5 + B \\
& A - B = 9 \text{ olur.} \\
& A + B = 89 \\
+ & A - B = 9 \\
\hline
& 2A = 98 \\
& A = 49 \Rightarrow B = 40 \text{ bulunur.}
\end{aligned}$$

$$(1+2+3) + \underbrace{4+5+6+\dots+n}_A = 49 + (1+2+3)$$

$$\frac{n \cdot (n+1)}{2} = 55$$

$$n \cdot (n+1) = 110$$

$$n = 10 \text{ bulunur.}$$

Cevap: B

$$\begin{aligned}
64. & 6ab = 15bc = 4ac \\
& 6a\cancel{b} = 15\cancel{b}c \quad 15b\cancel{c} = 4a\cancel{c} \\
& \frac{a}{c} = \frac{15k}{6k} \quad \frac{b}{a} = \frac{4k}{15k} \\
& k = 1 \text{ için} \\
& M.(a.b.c) = 15 \cdot 4 \cdot 6 = 360 \text{ bulunur.}
\end{aligned}$$

Cevap: D

$$\begin{aligned}
65. & ab + c = 63 \\
+ & a + bc = 41 \\
\hline
& a + c + b(a + c) = 104 \\
& \underbrace{(a + c)}_8(1 + b) = 104 \\
& 1 + b = 13 \\
& b = 12 \text{ bulunur.}
\end{aligned}$$

Cevap: D

$$\begin{aligned}
66. & f(x) = x^2 + a \\
& g(x) = \frac{x}{2a} \\
& (g \circ f)(3) = g(f(3)) \\
& f(3) = 3^2 + a = 9 + a \\
& g(9 + a) = \frac{9 + a}{2a} = 2 \\
& 4a = 9 + a \\
& 3a = 9 \\
& a = 3
\end{aligned}$$

Cevap: C

$$\begin{aligned}
67. & x + x \cdot y = 18 \\
& x \underbrace{(1 + y)} = 18 \\
& \downarrow \quad \downarrow \\
& 1 \quad 18 \quad (\text{sağlamaz ikinci denklemden}) \\
& 2 \quad 9 \quad (\text{sağlamaz ikinci denklemden}) \\
& 3 \quad 6 \\
& x = 3 \text{ ve } 1 + y = 6 \Rightarrow y = 5 \\
& x + 3z = 36 \\
& 3 + 3z = 36 \\
& 3z = 33 \Rightarrow z = 11 \\
& \text{O halde} \\
& x + y + z = 3 + 5 + 11 = 19 \text{ bulunur.}
\end{aligned}$$

Cevap: D

$$68. \frac{\sqrt{x+5}}{\sqrt{x-2}} \neq \frac{\sqrt{x}+\sqrt{2}}{\sqrt{x-5}}$$

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

$$\sqrt{x^2-25} = x-2$$

her iki tarafın parantez karesi alınır.

$$x^2 - 25 = (x-2)^2 = x^2 - 4x + 4$$

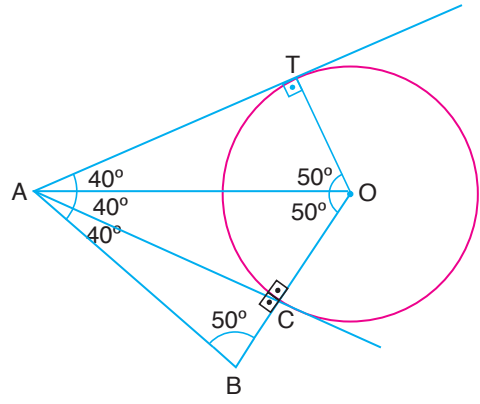
$$-25 = -4x + 4$$

$$-29 = -4x$$

$$\frac{29}{4} = x$$

Cevap: B

70.



[OT] [AT] ABO ikizkenar AC çembere teğettir.
 $m(\widehat{ABO}) = 50^\circ$ bulunur.

Cevap: D

$$69. \frac{3x-1}{2} = \frac{y+1}{3} = \frac{z+3}{4} = k$$

$$2/3x - 1 = 2k, \quad 2/y + 1 = 3k, \quad z + 3 = 4k$$

$$6x - 2 = 4k, \quad 2y + 2 = 6k, \quad -z = -4k + 3$$

$$6x = 4k + 2 \quad 2y = 6k - 2$$

$$6x + 2y - z = 15 \text{ ise}$$

$$4k + 2 + 6k - 2 - 4k + 3 = 15$$

$$6k + 3 = 15$$

$$6k = 12$$

$$k = 2 \text{ olur.}$$

$$\bullet y + 1 = 3k$$

$$y + 1 = 6 \Rightarrow y = 5$$

$$\bullet z + 3 = 4k$$

$$z + 3 = 8 \Rightarrow z = 5$$

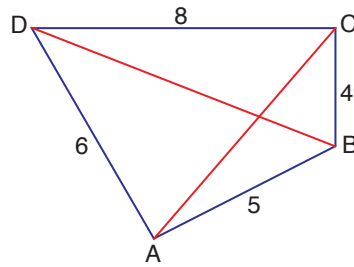
O halde

$$y + z = 5 + 5 = 10 \text{ bulunur.}$$

Cevap: E

TASARI EĞİTİM YAYINLARI

71.



$$\text{ABC üçgeninden} \quad 1 < |AC| < 9$$

$$\text{ADC üçgeninden} \quad 2 < |AC| < 14 \quad 2 < |AC| < 9$$

$$\text{DCB üçgeninden} \quad 4 < |DB| < 12$$

$$\text{DAB üçgeninden} \quad 1 < |DB| < 11$$

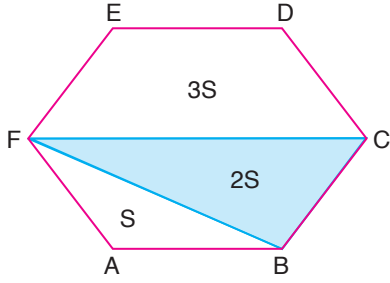
$$2 < |AC| < 9$$

$$+ \quad 4 < |DB| < 11$$

$$\hline 6 < |AC| + |DB| < 20$$

Cevap: B

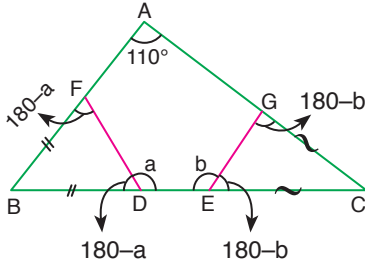
72.



$$\frac{A(ABCDEF)}{A(FBC)} = \frac{6S}{2S} = 3 \text{ olur.}$$

Cevap: B

73.



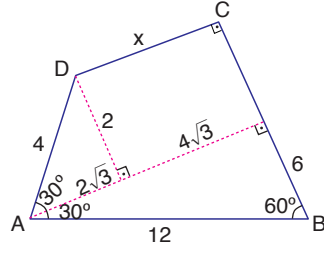
$$\begin{aligned} \Rightarrow s(\widehat{B}) &= 180^\circ - (180 - a + 180 - a) \\ s(\widehat{B}) &= 180^\circ - (360 - 2a) \\ &= 2a - 180^\circ \end{aligned}$$

$$\begin{aligned} \Rightarrow s(\widehat{C}) &= 180^\circ - (180^\circ - b + 180^\circ - b) \\ &= 180^\circ - (360^\circ - 2b) \\ &= 2b - 180^\circ \end{aligned}$$

$$\begin{aligned} \rightarrow \text{ABC üçgeninin iç açıları toplamından} \\ 110^\circ + 2b - 180^\circ + 2a - 180^\circ &= 180^\circ \\ 2a + 2b - 250 &= 180 \\ 2a + 2b &= 430 \\ a + b &= 215^\circ \text{ olur.} \end{aligned}$$

Cevap: C

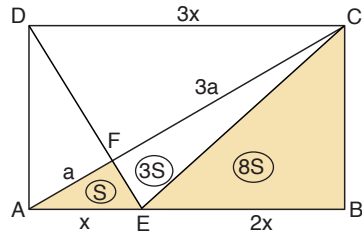
74.



$$x = 4\sqrt{3}$$

Cevap: B

75.

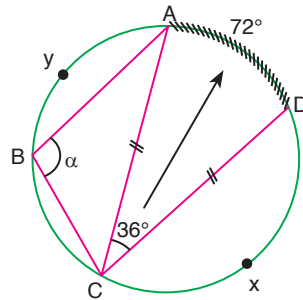


$$24S = 32 \rightarrow S = \frac{32}{24} = \frac{4}{3}$$

$$\text{Taralı alanların toplamı} = 9S = 9 \cdot \frac{4}{3} = 12$$

Cevap: E

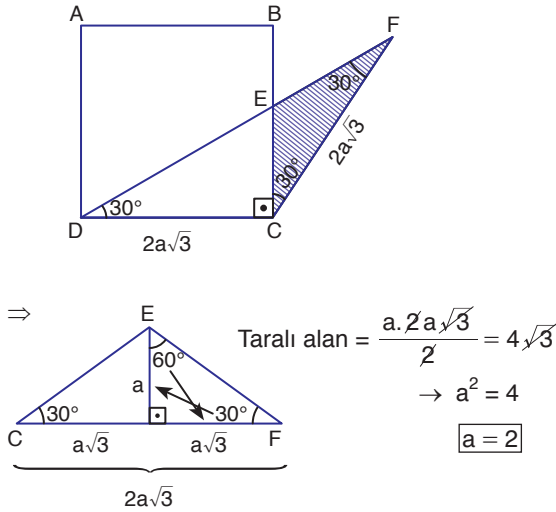
76.



$$\begin{aligned} |AC| &= |CD| \Rightarrow m(\widehat{AyC}) = m(\widehat{CxD}) = m \\ \Rightarrow m + m + 72^\circ &= 360^\circ \\ 2m &= 288^\circ \\ m &= 144^\circ \text{ olur.} \\ \Rightarrow 2\alpha &= 72 + 144 \\ 2\alpha &= 216 \\ \alpha &= 108 \end{aligned}$$

Cevap: D

77.



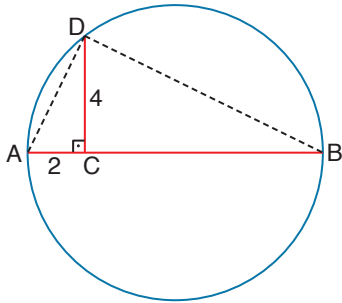
O halde karenin bir kenarı

$$2a\sqrt{3} = 2 \cdot 2\sqrt{3} = 4\sqrt{3} \text{ br'dir.}$$

Karenin alanı $(4\sqrt{3})^2 = 16 \cdot 3 = 48 \text{ br}^2$ dir.

Cevap: C

78.



AD ve DB yardımcı doğru parçaları çizilirse, çapı gören çevre açısı 90° olduğundan ADB dik üçgeni elde edilir.

ADB dik üçgeninde Öklid yükseklik bağıntısı ile

$$4^2 = 2 \cdot |CB|$$

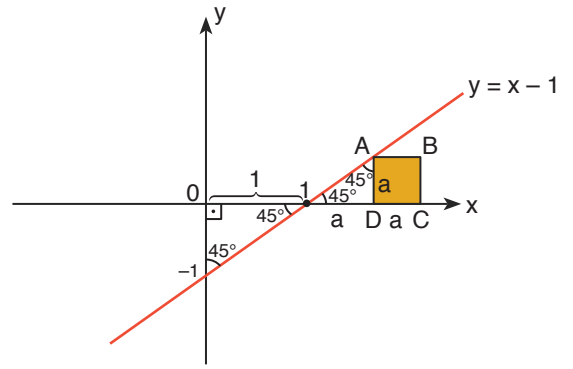
$$16 = 2 \cdot |CB|$$

$$|CB| = 8 \text{ bulunur.}$$

Böylece $|AB| = 10 \text{ cm}$ olur. $r = 5 \text{ cm}$ Dairenin alanı $\pi r^2 = \pi \cdot 5^2 = 25\pi \text{ cm}^2$ bulunur.

Cevap: C

79.



$$\bullet |OC| = 5 = 1 + a + a$$

$$2a + 1 = 5$$

$$2a = 4$$

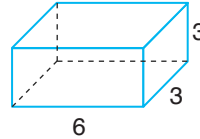
$$a = 2 \text{ br}$$

$$\bullet \text{ O halde karenin alanı } a^2 = 2^2 = 4 \text{ br}^2 \text{ dir.}$$

Cevap: B

TASARI EĞİTİM YAYINLARI

80.

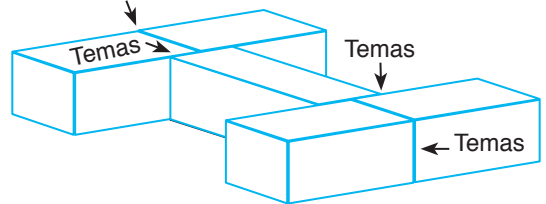


$$\Rightarrow \text{Yüzey alanı} = 2(3 \cdot 3 + 6 \cdot 3 + 6 \cdot 3)$$

$$= 90 \text{ br}^2$$

Temas yüzeylerinde 2 tane

$$3 \cdot 3 = 9 \text{ br}^2 \text{ kayıp}$$

5 tane eş şeklin toplam yüzey alanı $5 \cdot 90 = 450 \text{ br}^2$.Temas yüzeylerinde 2'şer tane $3 \cdot 3 = 9 \text{ br}^2$ kayıp o halde şeklin yüzey alanı $= 450 - 8 \cdot 9 = 378 \text{ br}^2$ olur.

Cevap: A