

TR-YÖS

TARAMA

TESTİ
4

ÇÖZÜM



ÇÖZÜMLERİ

$$1. \quad 1 + \frac{1}{1 - \frac{2}{3}} - \frac{2 - \frac{1}{3}}{1 + \frac{3}{2}}$$

$$1 + \frac{1}{\frac{3-2}{3}} - \frac{\frac{6-1}{3}}{\frac{2+3}{2}} = 1 + \frac{1}{\frac{1}{3}} - \frac{\frac{5}{3}}{\frac{5}{2}}$$

$$= 1 + 3 \cdot \frac{3}{1} - \frac{2}{3} = 4 - \frac{2}{3} = \frac{10}{3}$$

Cevap: E

$$2. \quad \frac{0,3}{3} - \left(\frac{6,25 \cdot 1,5}{12,5 \cdot 0,6} \right)$$

$$\frac{0,3}{30} - \left(\frac{6,25 \cdot 1,5}{12,50 \cdot 0,6} \right)$$

$$\frac{3}{30} - \left(\frac{625 \cdot 15}{1250 \cdot 6} \right) = \frac{1}{10} - \left(\frac{1}{2} \cdot \frac{2}{5} \right)$$

$$= \frac{1}{10} - \frac{2}{10} = -\frac{1}{10}$$

Cevap: D

$$3. \quad \frac{8! + 7! \cdot 5! + 3!}{8! - 9! \cdot 3! - 4!} =$$

$$\frac{8 \cdot 7! + 7! \cdot 5 \cdot 4 \cdot 3! + 3!}{8! - 9 \cdot 8! \cdot 3! - 4 \cdot 3!} = \frac{7!(8+1) \cdot 3!(20+1)}{8!(1-9) \cdot 3!(1-4)}$$

$$\frac{7! \cdot 9 \cdot 3! \cdot 21}{8! \cdot -8 \cdot 3! \cdot -3} = \frac{9}{-64} \cdot -7 = \frac{63}{64}$$

Cevap: E

$$4. \quad K = 7L + 3, L = 5M + 1 \Rightarrow K = 35M + 10$$

$$\frac{M + 2L + 3M - 12}{6M}$$

$$= \frac{35M + 10 + 10M + 2 + 3M - 12}{6M}$$

$$= \frac{48M}{6M} = 8$$

Cevap: A

$$5. \quad x + \frac{3}{y} = 4 \Rightarrow xy + 3 = 4y$$

$$y + \frac{3}{x} = 8 \Rightarrow xy + 3 = 8x$$

$$\Rightarrow 4y = 8x \text{ ve } y = 8$$

$$\Rightarrow \frac{y+x}{y-x} = \frac{8+4}{8-4} = \frac{12}{4}$$

$$= 3$$

Cevap: B

$$6. \quad \frac{(3^3)^{2n} - (3^2)^{3n+1}}{3^{6n-1}} - \frac{(2^2)^{3n} - (2^3)^{2n-1}}{2^{6n-3}}$$

$$\frac{3^{6n} - 3^{6n+2}}{3^{6n-1}} - \frac{2^{6n} - 2^{6n-3}}{2^{6n-3}}$$

$$= \frac{3^{6n}(1-9)}{3^{6n} \cdot \frac{1}{3}} - \frac{2^{6n}(1-\frac{1}{3})}{2^{6n} \cdot \frac{1}{8}}$$

$$= -8 \cdot 3 - \frac{7}{8} \cdot 8$$

$$= -24 - 7$$

$$= -31$$

Cevap: B

$$7. \quad \frac{\sqrt{y^4} + 2\sqrt{y^2}}{y} - \sqrt{x^2 - 2xy + y^2} = -5$$

$$\frac{y^2 + 2|y|}{y} - |x-y| = -5 \quad \frac{y^2 - y}{y} + x - y = -5$$

$$y - 1 + x - y = -5$$

$$x = -4$$

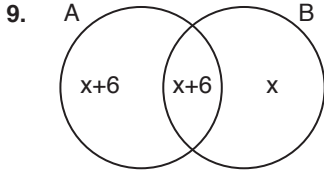
Cevap: C

$$8. \quad \frac{(a-b)^2(c-a) - (a-c)^2(b-a)}{a^2 - ab - ac + bc}$$

$$\frac{(b-a)(c-a)(b-a-c+a)}{a(a-b) - c(a-b)}$$

$$= \frac{(b-a)(c-a) \cdot (b-c)}{(a-b)(a-c)} = b - c$$

Cevap: B



$$\Rightarrow n(A \cup B) = x + 6 + x + 6 + x = 24$$

$$3x + 12 = 24$$

$$3x = 12$$

$$x = 4$$

$$\Rightarrow n(B) = x + 6 + x = 2x + 6 = 2 \cdot 4 + 6 = 14$$

Cevap: B

10. $f(x) = x^2 - 8x + a$

$$f(1) = 1 - 8 + a = -5$$

$$-7 + a = -5$$

$$a = 2$$

$$f(x) = x^2 - 8x + 2$$

$$f(2) = 2^2 - 8 \cdot 2 + 2 = 4 - 16 + 2 = -10$$

Cevap: D

11. $bc + a = 6$

$$ac + b = 18$$

$$bc - ac + a - b = -12$$

$$-c(a - b) + (a - b) = -12$$

$$3 \cdot (-c + 1) = -12$$

$$-c + 1 = -4$$

$$5 = c$$

Cevap: A

12.
$$\frac{(a+b)^2 - ab}{a^3 - b^3} = \frac{a^2 + 2ab + b^2 - ab}{(a-b)(a^2 + ab + b^2)}$$

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

$$= \frac{1}{a-b} = \frac{1}{4}$$

Cevap: B

13. $f(x) = \frac{3x-7}{4x-8} \Rightarrow f^{-1}(x) = \frac{8x-7}{4x-3}$

$$f^{-1}(x) = \frac{8-7}{4-3} = \frac{1}{1} = 1$$

Cevap: B

14.
$$\frac{8xy - 2x^2y^2}{2 - (xy)^{1/2}} = \frac{2xy + (xy)^{3/2}}{k}$$

$$\frac{2xy(4 - xy)}{2 - \sqrt{xy}} = \frac{2xy + xy\sqrt{xy}}{k}$$

$$\frac{2xy(4 - xy)}{2 - \sqrt{xy}} = \frac{xy(2 + \sqrt{xy})}{k}$$

$$k \cdot 2(4 - xy) = (2 + \sqrt{xy})(2 - \sqrt{xy})$$

$$k \cdot 2(4 - xy) = (4 - xy)$$

$$2k = 1 \Rightarrow k = \frac{1}{2}$$

Cevap: B

15.
$$\frac{3x-1}{2} + 4 = \frac{2x+3}{3} - 1$$

$$\frac{3x-1+8}{2} = \frac{2x+3-3}{3}$$

$$\frac{3x+7}{2} = \frac{2x}{3}$$

$$9x + 21 = 4x$$

$$5x = -21 \Rightarrow x = -\frac{21}{5}$$

Cevap: A

16. $x = 0 \Rightarrow f(2) - f(1) - 2f(0) = 0$

$$f(2) - 3 - 2 \cdot 2 = 0 \Rightarrow f(2) = 7$$

$$x(1) \Rightarrow f(3) - f(2) - 2f(1) = 0$$

$$f(3) - 7 - 2 \cdot 3 = 0$$

$$f(3) = 13$$

$$x = 2 \Rightarrow f(4) - f(3) - 2f(2) = 0$$

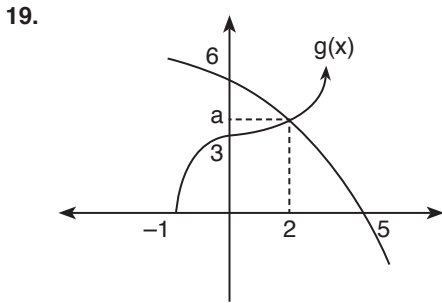
$$f(4) - 13 - 2 \cdot 7 = 0$$

$$f(4) = 27$$

Cevap: E

$$\begin{aligned}
 17. \quad & \frac{x^2+1}{x^4+x^2} : \frac{x^2-1}{x^4-x^2} \\
 &= \frac{x^2+1}{x^2(x^2+1)} \cdot \frac{x^2(x^2-1)}{x^2-1} \\
 &= \frac{x^2}{x^2} \\
 &= 1
 \end{aligned}$$

$$\begin{aligned}
 18. \quad & f(x) = 6x^2 - 4x - 1 \\
 & \Rightarrow x_1 + x_2 = \frac{-(-4)}{6} = \frac{4}{6} = \frac{2}{3} \\
 & \Rightarrow x_1 \cdot x_2 = -\frac{1}{6} \\
 & \Rightarrow x_1 \cdot x_2 = -\frac{1}{6} \\
 & \Rightarrow \frac{1}{x_1} + \frac{1}{x_2} = \frac{x_1+x_2}{x_1 \cdot x_2} = \frac{\frac{2}{3}}{-\frac{1}{6}} = -4
 \end{aligned}$$



$$\begin{aligned}
 g(-1) &= 0 \\
 g(0) &= 3 \\
 g(2) &= a \\
 f(2) &= a \\
 f(5) &= 0 \Rightarrow f^{-1}(0) = 5 \\
 f(0) &= 6 \\
 f^{-1}(0) + g(2) + f(0) - f(2) \\
 5 + a + 6 - a &= 11
 \end{aligned}$$

Cevap: E

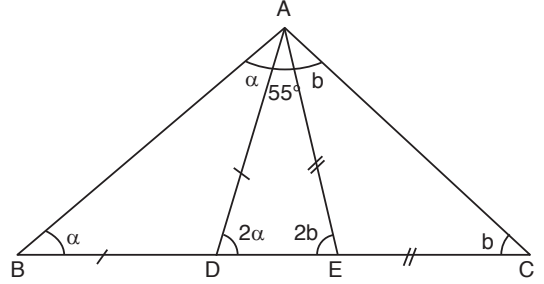
Cevap: C

Cevap: D

$$\begin{aligned}
 20. \quad & 48^x = B \\
 & 16^x \cdot 3^x = B \\
 & (2^x)^4 \cdot 3^x = B \\
 & A^4 \cdot 3^x = B \Rightarrow 3^x = \frac{B}{A^4}
 \end{aligned}$$

Cevap: A

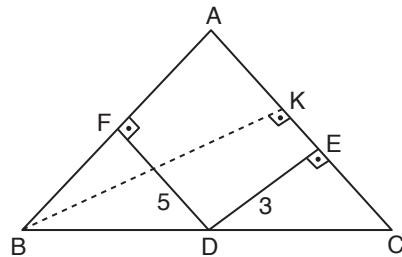
21.



$$\begin{aligned}
 |AD| &= |BD| \text{ ise} \\
 m(\widehat{ABD}) &= m(\widehat{DAB}) = a \text{ olsun} \\
 |AE| &= |EC| \text{ ise} \\
 m(\widehat{EAC}) &= m(\widehat{ECA}) = b \text{ olsun} \\
 \text{İki iç açı toplamı bir dışa eşittir kuralı gereği} \\
 a + a &= m(\widehat{ADE}) \text{ olur.} \\
 b + b &= m(\widehat{AEC}) \text{ olur.} \\
 \text{İç açılar toplamı } 180^\circ \text{ olup} \\
 55 + 2a + 2b &= 180 \\
 2a + 2b &= 125 \\
 a + b &= 62,5 \\
 m(\widehat{BAC}) &= 55 + 62,5 \\
 &= 117,5 \text{ olur.}
 \end{aligned}$$

Cevap: A

22.

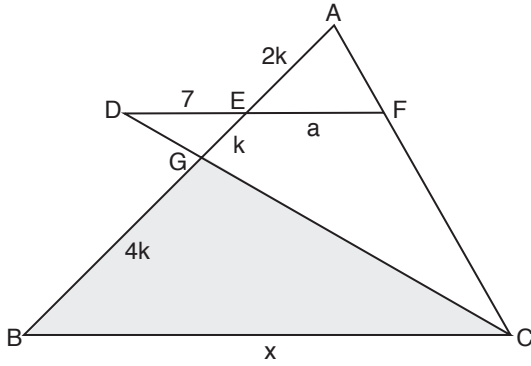


İkizkenar üçgenlerde bilinmesi gereken; kural ikizkenar üçgenin tabanında seçilen D noktasının bu ikizkenarlara çizilen dik uzunlukların toplamı ikizkenarlara ait yüksekliğe eşittir.

$$\begin{aligned}
 \text{O halde } |FD| + |DE| &= |BK| \text{ olur.} \\
 5 + 3 &= |BK| \\
 8 &= |BK|
 \end{aligned}$$

Cevap: B

23.



$$\frac{7}{x} = \frac{k}{4k} \Rightarrow x = 28$$

$$\frac{2k}{7k} = \frac{a}{x}$$

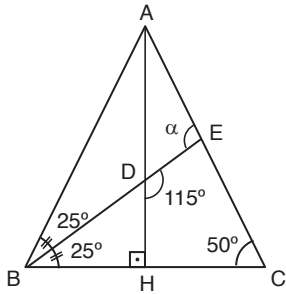
$$\frac{2}{7} = \frac{a}{28}$$

$$7a = 56$$

$$a = 8$$

Cevap: C

24.



$$m(\widehat{DBH}) + 90^\circ = 115^\circ$$

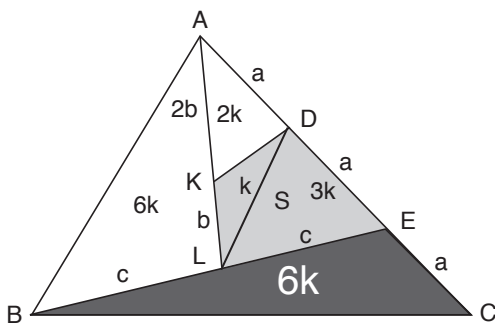
$$m(\widehat{DBH}) = 25^\circ$$

$$|AB| = |AC| \Rightarrow m(\widehat{BCA}) = 50^\circ$$

$$\Rightarrow \alpha = 25^\circ + 50^\circ = 75^\circ$$

Cevap: E

25.



$$S = 4k \Rightarrow k = \frac{S}{4}$$

$$? = 6k = 6 \cdot \frac{S}{4} = \frac{3S}{2}$$

Cevap: C

$$26. \text{ i) } \left. \begin{array}{l} \text{NET} \\ \text{CET} \end{array} \right\} \left\{ \begin{array}{l} 526 \\ 726 \end{array} \right. \Rightarrow E = 2, T = 6$$

$$\text{ii) } T = 6 \text{ ise } \underline{TAM} = \underline{631} \Rightarrow A = 3, M = 1$$

$$\text{iii) } M = 1 \text{ ise } \underline{MEN} = \underline{125} \Rightarrow N = 5$$

$$\text{O halde } \Rightarrow \text{NET} = 526$$

Cevap: C

$$27. (a^{-5}, b^{-3}) \boxplus (c^{-1}, d^{-3}) = (2.4, 3-7) = (8, -4)$$

$$a^{-5} = \frac{1}{32}$$

$$a^{-5} = 2^{-5}$$

$$a = 2$$

$$c^{-1} = \frac{1}{7}$$

$$c^{-1} = 7^{-1}$$

$$c = 7$$

$$d^{-3} = \frac{1}{64}$$

$$d^{-3} = 4^{-3}$$

$$d = 4$$

$$b^{-3} = \frac{1}{27}$$

$$b^{-3} = 3^{-3}$$

$$b = 3$$

Cevap: E

TASARI EĞİTİM YAYINLARI

$$28. \text{ I. } 2361 \rightarrow 9 = 2.6 - 3.1$$

$$\text{II. } 2453 \rightarrow -2 = 2.5 - 4.3$$

$$\text{III. } 3642 \rightarrow 0 = 3.4 - 6.2$$

$$\text{IV. } 4481 \rightarrow 28 = 4.8 - 4.1$$

$$\text{V. } 5683 \rightarrow 22 = 5.8 - 6.3$$

$$\text{VI. } 6873 \rightarrow 18 = 6.7 - 8.3$$

Cevap: B

29.

1.	2.	3.	4.	5.	6.	7.	...	18.
5	10	7	12	9	14	11	...	X

$$+2$$

$$+2$$

9. terim

$$2. \text{ terim } \rightarrow 10$$

$$4. \text{ terim } \rightarrow 12$$

$$6. \text{ terim } \rightarrow 14$$

:

$$18. \text{ terim } \rightarrow 26$$

$$10 + 8.2 = 26$$

Cevap: E

30. E şıkkı hariç diğer seçenekler iç içe verilen şekillerin hepsi aynı.

Cevap: E

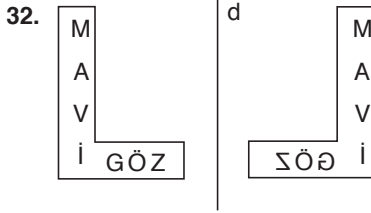
31. Kenar sayılarının çarpımı alınmış.

$$\begin{array}{|c|} \hline 4 \\ \hline \triangle \\ \hline \end{array} \rightarrow 12 = 4 \cdot 3 = 12$$

$$\begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \end{array} \rightarrow 16 = 4 \cdot 4 = 16$$

$$\begin{array}{|c|} \hline \triangle \\ \hline \triangle \\ \hline \end{array} \rightarrow 18 = 6 \cdot 3 = 18$$

$$\begin{array}{|c|} \hline \circ \\ \hline \circ \\ \hline \end{array} \rightarrow ? = 6 \cdot 0 = 0$$



Cevap: A

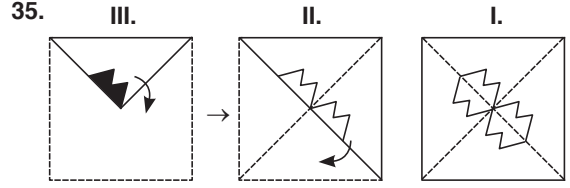
33. $3\square = 4\bullet = 8\triangle = \blacksquare = 24$

$$\frac{6 - 2 \cdot 3 + 2 \cdot 24}{(12 \cdot 8 \cdot 6) : 24} = \frac{48}{24} = 2$$

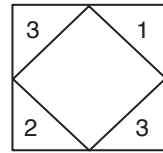
Cevap: C

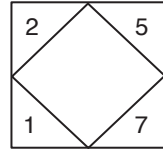
34. $392 \rightarrow 25 = 3 \cdot 9 - 2$
 $643 \rightarrow 21 = 6 \cdot 4 - 3$
 $631 \rightarrow 17 = 6 \cdot 3 - 1$
 $346 \rightarrow ? = 3 \cdot 4 - 6 = 6$

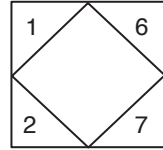
Cevap: A



Cevap: A

36.  $\rightarrow 24 = 3^3 - (2 + 1)$

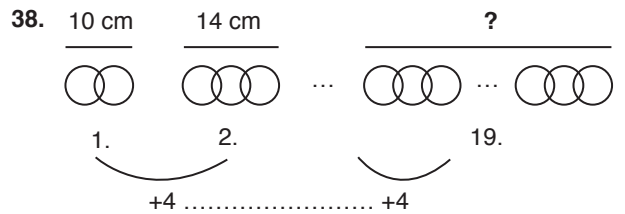
 $\rightarrow 43 = 7^2 - (5 + 1)$

 $\rightarrow ? = 7^1 - (6 + 2) = -1$

Cevap: A

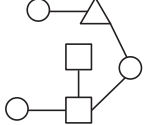
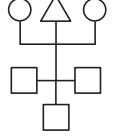
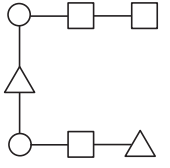
37. $5 \xrightarrow{+3} 8 \xrightarrow{+9} 17 \xrightarrow{+27} 44 \xrightarrow{+81} ? \xrightarrow{+243} 368$
 $\Rightarrow 44 + 81 = 125$

Cevap: D



$$? = 10 + 18 \cdot 4 = 82 \text{ cm}$$

Cevap: C

39.  $\triangle \rightarrow 1 \text{ tane} \Rightarrow A = 1$
 $\square \rightarrow 2 \text{ tane}$
 $\circ \rightarrow 3 \text{ tane}$
-  $\triangle \rightarrow 1 \text{ tane}$
 $\square \rightarrow 3 \text{ tane} \Rightarrow B = 3$
 $\circ \rightarrow 2 \text{ tane}$
-  $\triangle \rightarrow 2 \text{ tane}$
 $\square \rightarrow 3 \text{ tane}$
 $\circ \rightarrow 2 \text{ tane} \Rightarrow C = 2$
- $\Rightarrow A + B + C = 1 + 3 + 2 = 6$

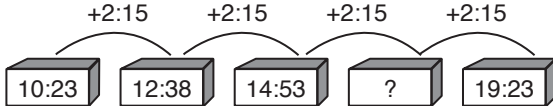
Cevap: D

40. $(4.2.3) \times 2^{1.5} = K.16.4$
 $24 \cdot 32 = 64K$
 $24 = 2K \Rightarrow K = 12$

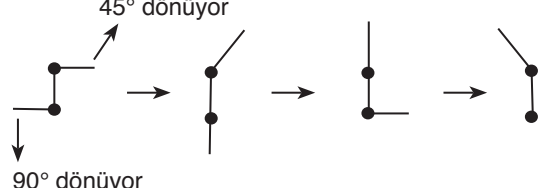
Cevap: E

41. I. $a + a = 6c$
 $2a = 6c$
 $a = 3c$
 $b + c = a + 8$
 $b + c = 3c + 8$
 $b - 2c = 8$
- II. $b.c = 4a$
 $b.c = 4(3c)$
 $b.c = 12c$
 $b = 12$
 $\Rightarrow b - 2c = 8$
 $12 - 2c = 8$
 $4 = 2c$
 $c = 2$

Cevap: A

42. 
- $14 : 53 + 2 : 15 = 17 : 08$

Cevap: D

43. 

Cevap: D

44. I. $\nabla 317 = (3 + 1) \cdot 7 = 4 \cdot 7 = 28$
 II. $\nabla 412 = (4 + 1) \cdot 2 = 5 \cdot 2 = 10$
 III. $\nabla 504 = (5 + 0) \cdot 4 = 5 \cdot 4 = 20$
 IV. $\nabla 732 = (7 + 3) \cdot 2 = 10 \cdot 2 = 20$

Cevap: B

45. $a + b = 5b$ $b + c = 6b$ $a + c = 36$
 $a = 4b$ $c = 5b$ $4b + 5b = 36$
 $9b = 36$
 $b = 4$
 $\Rightarrow a = 4 \cdot b = 4 \cdot 4 = 16$
 $\Rightarrow c = 5b = 5 \cdot 4 = 20$
 $\Rightarrow a \cdot c = 16 \cdot 20 = 320$

Cevap: E

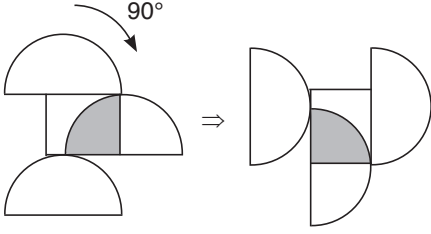
46. $a \cdot c = 72$
 $a \cdot b = 24$
 $\Rightarrow \frac{a \cdot c}{a \cdot b} = \frac{72}{24}$
 $\frac{c}{b} = 3$

Cevap: B

47. $ABAB4 \mid AB$
 $\underline{- AB} \quad \mid 1010$
 $00AB \quad \Rightarrow 1010 + 4 = 1014$
 $\underline{- AB}$
 04

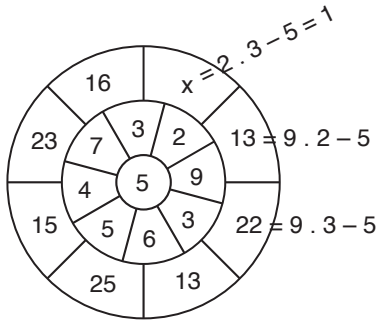
Cevap: E

48. 450° içindeki tam tur yani 360° yi atarsak;
 $450^\circ - 360^\circ = 90^\circ$ döndürmek yeterlidir.



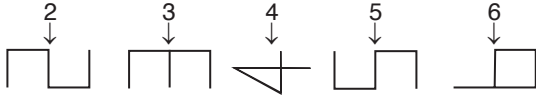
Cevap: D

49.



Cevap: A

50.



Cevap: A