

# TR-YÖS

TARAMA

# TESTİ

# 3

# ÇÖZÜM





## ÇÖZÜMLERİ

1.  $a^2 - b^2 = 11$

$(a - b)(a + b) = 11$

$1 \quad 11$

$a - b = 1 \rightarrow \quad 6 - b = 1 \quad b = 5$

$+ \quad a + b = 11$

$\hline 2a = 12 \Rightarrow a = 6$

$\Rightarrow a^2 + b^2 = 6^2 + 5^2 = 36 + 25 = 61$

Cevap: E

|    |         |       |         |
|----|---------|-------|---------|
| 2. | A B C D | A = 4 | 4 1 4 9 |
|    | A B C   | B = 1 | 4 1 4   |
|    | + A     | C = 4 | + 4     |
|    | 4 5 6 7 | D = 9 | 4 5 6 7 |

$\Rightarrow A + B + C + D = 4 + 1 + 4 + 9 = 18$

Cevap: C

3.  $a - b + c = 11 \rightarrow 9 - b = 11 \Rightarrow b = -2$

$+ \quad a + b + c = 7$

$\hline 2a + 2c = 18$

$a + c = 9$

$\Rightarrow \frac{a+c}{b+1} = \frac{9}{-2+1} = \frac{9}{-1} = -9$

Cevap: A

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

$2 - 5x = 12 - 6x$

$x = 10$

Cevap: C

5.  $\frac{\frac{5}{3} - 1\frac{1}{3}}{1\frac{1}{3} + \frac{2}{3}} = \frac{\frac{5}{3} - \frac{4}{3}}{\frac{4}{3} + \frac{2}{3}} = \frac{\frac{1}{3}}{\frac{6}{3}} = \frac{1}{3} = \frac{1}{6}$

Cevap: E

6.  $a + \frac{1}{b + \frac{2}{c}} = 2 + \frac{3}{5} = 2 + \frac{1}{\frac{5}{3}} = 2 + \frac{1}{1 + \frac{2}{3}}$

$\Rightarrow a = 2, b = 1 \text{ ve } c = 3 \text{ olur.}$

$\Rightarrow a + b + c = 2 + 1 + 3 = 6$

Cevap: D

Cevap: C

7.  $x^2 + xy + xz + yz = x(x + y) + z(x + y)$   
 $= (x + y)(x + z)$   
 $= 6 \cdot 4$   
 $= 24$

Cevap: B

8.  $x^2 - 9y^2 = 35$   
 $(x - 3y)(x + 3y) = 35$   
 $5 \quad 7$

$x - 3y = 5$

$+ \quad x + 3y = 7$

$\hline 2x = 12$

$x = 6$

Cevap: E

$$9. \quad x - \frac{1}{2x} = 2 \Rightarrow \left(x - \frac{2}{2x}\right)^2 = 2^2$$

$$x^2 - 2 \cdot x \cdot \frac{1}{2x} + \frac{1}{4x^2} = 4$$

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

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

Cevap: A

$$10. \quad t^7 + 1 = (t^3)^2 \cdot t + 1 = (t-1)^2 \cdot t + 1$$

$$= (t^2 - 2t + 1) \cdot t + 1$$

$$= t^3 - 2t^2 + t + 1$$

$$= t - 1 - 2t^2 + t + 1$$

$$= 2t - 2t^2$$

$$= 2(t - t^2)$$

Cevap: D

$$11. \quad \frac{x^2 + bx + c}{x^2 - 3x - 4} = \frac{ax^2 + bx + c}{(x-4)(x+1)} = \frac{x-2}{x+1}$$

$$\Rightarrow ax^2 + bx + c = (x-4)(x-2)$$

$$ax^2 + bx + c = x^2 - 6x + 8$$

$$a = 1, b = -6 \text{ ve } c = 8$$

Cevap: C

$$12. \quad \frac{3^{85} - 3^{84}}{9^{42}} = \frac{3^{84} \cdot 3^1 - 3^{84}}{(3^2)^{42}} = \frac{3^{84}(3-1)}{3^{84}} = 2$$

Cevap: A

$$13. \quad \frac{(-a)^{-2} \cdot (-a^{-2}) \cdot (a^{-2})^{-3}}{\left(\frac{1}{a}\right)^3 \cdot (-a)^{-1}} = \frac{a^{-2} \cdot -a^{-2} \cdot a^6}{a^{-3} \cdot -a^{-1}} = \frac{a^2}{a^{-4}}$$

$$= a^6$$

Cevap: A

$$14. \quad \frac{0,005 \cdot 10^{35} + 0,8 \cdot 10^{33}}{10^{32}}$$

$$= \frac{5 \cdot 10^{-3} \cdot 10^{35} + 8 \cdot 10^{-1} \cdot 10^{33}}{10^{32}}$$

$$= \frac{5 \cdot 10^{32} + 8 \cdot 10^{32}}{10^{32}} = \frac{13 \cdot 10^{32}}{10^{32}} = 13$$

Cevap: C

$$15. \quad 3^x \cdot 5^y \cdot 7^z = 3$$

$$6^x \cdot 10^y \cdot 14^z = 12 \Rightarrow 2^x \cdot 2^y \cdot 2^z \cdot \underbrace{3^x \cdot 5^y \cdot 7^z}_3 = 12$$

$$\Rightarrow 2^{x+y+z} = 4$$

$$\Rightarrow 2^{x+y+z} = 2^2$$

$$\Rightarrow x+y+z = 2$$

Cevap: A

$$16. \quad \bullet \quad x^2 - 5x + 4 \leq 0 \quad (x-4)(x-1) \leq 0$$

$$\Rightarrow \begin{array}{c} \text{---} \\ | \quad | \\ \circ \quad - \quad \circ \\ | \quad | \\ \text{---} \end{array} \quad (1, 4) = A$$

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

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

$$A \cap B \Rightarrow [1, 3] \text{ olur. } \Rightarrow |x-2| \leq 1$$

Cevap: E

$$17. \quad x \cdot y = 36 = 2^{\textcircled{2}} \cdot 3^{\textcircled{2}}$$

$$\text{Pozitif çarpan sayısı } (2+1)(2+1) = 9$$

$$(1,36)(2,18)(3,12)(4,9)(6,6)(9,4)(12,3)(18,2)(36,1)$$

9 tane (x, y) ikilisi vardır.

Cevap: B

18.  $A = \{a, b, c, d\}$      $B = \{c, d, e, f\}$      $C = \{b, c, f\}$   
 $B \cap C = \{c, f\}$   
 $A - (B \cap C) = \{a, b, c, d\} - \{c, f\} = \{a, b, d\}$

Cevap: D

19.  $A_2 = \{x \in \mathbb{R} \mid (-1)^2 \cdot 2 < x < 2a\} \Rightarrow 2 < x < 2a$   
 $A_3 = \{x \in \mathbb{R} \mid (-1)^3 \cdot 3 < x < 3a\} \Rightarrow -3 < x < 3a$

$$2 < x < 2a$$

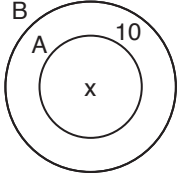
↓  
5

$$A_6 = \{x \in \mathbb{R} \mid (-1)^6 \cdot 6 < x < 6a\} \Rightarrow 6 < x < 6a$$

↓  
15

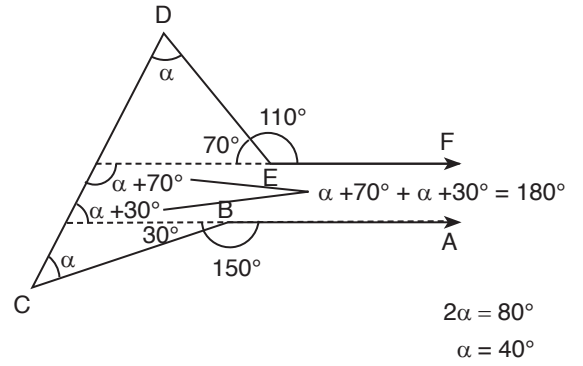
$$\Rightarrow A_6 \rightarrow (6, 15)$$

Cevap: A

20.   $3s(B) = 5s(A)$   
 $3(x + 10) = 5x$   
 $3x + 30 = 5x$   
 $30 = 2x$   
 $15 = x$   
 $\Rightarrow 5(B) = x + 10 = 15 + 10 = 25$

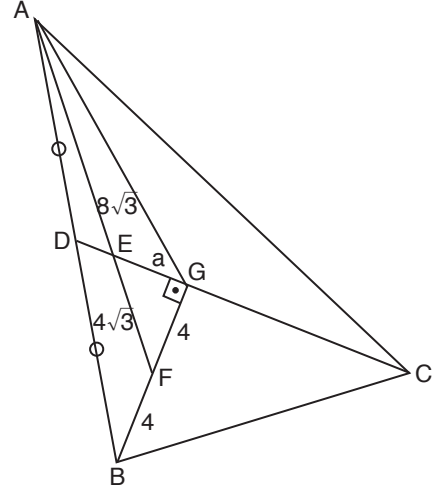
Cevap: A

21.



Cevap: D

22.

E noktası  $AB6$  üçgeninin ağırlıklı merkezi olur.

$$\Rightarrow a^2 + 4^2 = (4\sqrt{3})^2$$

$$a^2 + 16 = 48$$

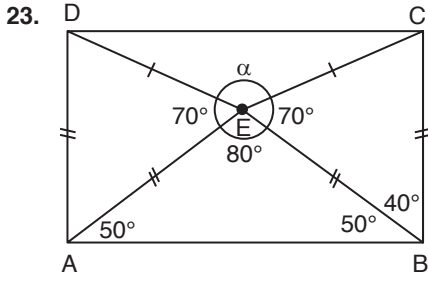
$$a^2 = 32$$

$$a = 4\sqrt{2}$$

$$\Rightarrow |DE| = \frac{|EG|}{2}$$

$$|DE| = \frac{4\sqrt{2}}{2} = 2\sqrt{2}$$

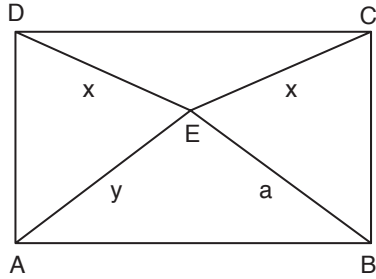
Cevap: C



$$70^\circ + 80^\circ + 70^\circ + \alpha = 360^\circ$$

$$\alpha = 360^\circ - 220^\circ$$

$$\alpha = 140^\circ$$

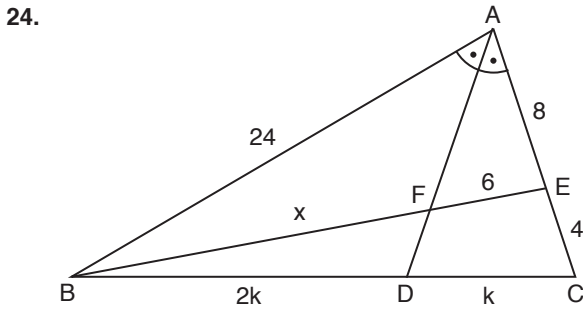


$$x^2 + a^2 = x^2 + y^2$$

$$a^2 = y^2$$

$$a = y$$

Cevap: D



$$\frac{|AB|}{2k} = \frac{|AC|}{k}$$

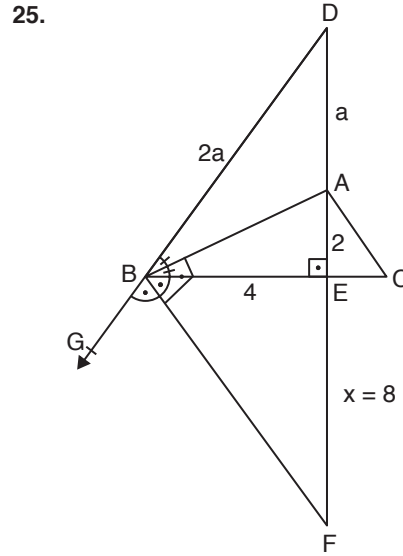
$$\Rightarrow \frac{|AB|}{2} = 12 \Rightarrow |AB| = 24$$

$$\frac{|AB|}{x} = \frac{8}{6}$$

$$\Rightarrow \frac{24}{x} = \frac{8}{6}$$

$$x = 18$$

Cevap: D



•  $\widehat{BAF}$  öklid  
 $4^2 = 2 \cdot x$   
 $x = 8$

•  $\widehat{BED}$  iç açıortay

$$\frac{|AE|}{|BE|} = \frac{|AD|}{|BD|}$$

$$\frac{2}{4} = \frac{|AD|}{|BD|} \Rightarrow |AD| = a, |BD| = 2a$$

• BFD dış açıortay

$$\frac{\frac{2}{8}}{10+a} = \frac{4}{2a}$$

$$4a = 10 + a$$

$$3a = 10$$

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

$$\Rightarrow |DF| = a + 10 = \frac{10}{3} + 10 = \frac{40}{3}$$

Cevap: A

26. 


|             |            |             |             |                                                                                         |
|-------------|------------|-------------|-------------|-----------------------------------------------------------------------------------------|
| $\triangle$ | $\otimes$  | $\diamond$  | $\square$   | } $5 \overline{)23} \quad \overline{)765} \quad 267 \overline{)1}$<br>$3256 \quad 6537$ |
| $\otimes$   | $\square$  | $\oplus$    | $\odot$     |                                                                                         |
| $\diamond$  | $\odot$    | $\otimes$   | $\triangle$ |                                                                                         |
| $\odot$     | $\oplus$   | $\square$   | $\diamond$  |                                                                                         |
| $\square$   | $\diamond$ | $\triangle$ | $\oplus$    |                                                                                         |
|             |            |             |             |                                                                                         |

$$\Rightarrow \odot = 1$$

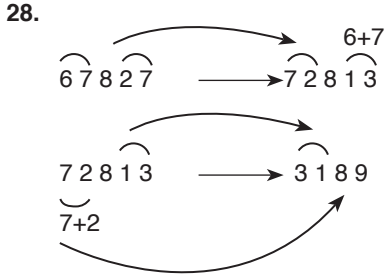
$$\odot \oplus \square \diamond = 1765$$

1

Cevap: A

27.   $\binom{5}{2} = \frac{5!}{(5-2)! \cdot 2!} = \frac{120}{6 \cdot 2} = 10$

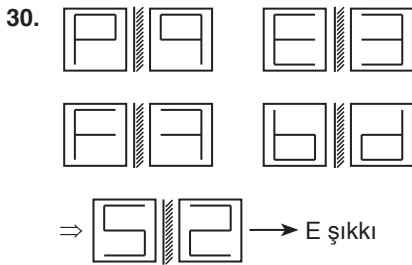
Cevap: C



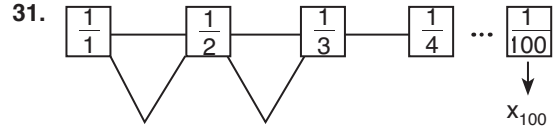
Cevap: A

29.  $18:2$   $3 \cdot (9+1)$   $30:2$   $3 \cdot (15+1)$   $48:2$   $3 \cdot (24+1)$   
 $18$   $9$   $30$   $15$   $48$   $24$   $75$

Cevap: A



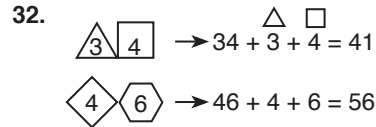
Cevap: E



$$\frac{1}{1} \cdot \frac{1}{2} = \frac{1}{2} \quad \frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6} \quad \dots$$

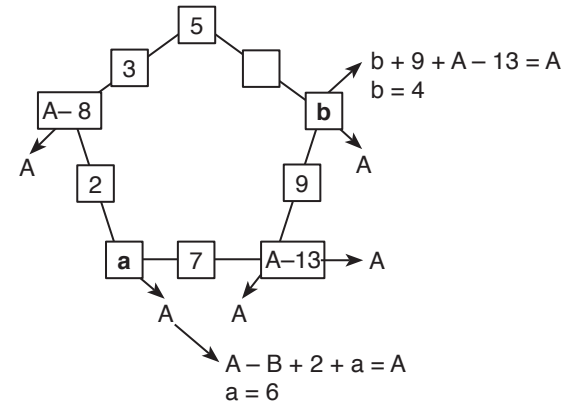
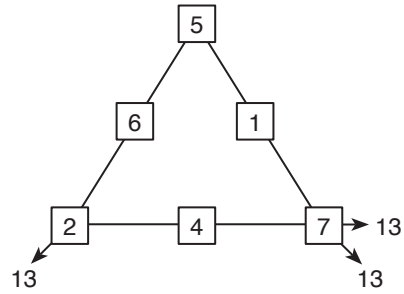
$$x_1 - x_{100} = 1 - \frac{1}{100} = \frac{99}{100} = 0,99$$

Cevap: D



Cevap: C

33.



$$\Rightarrow a + b = 6 + 4 = 10$$

Cevap: B





40.  $a + b = c$

$$\begin{aligned} a \cdot b = 12 + c &\Rightarrow a \cdot b = 12 + a + b \\ ab - a &= 12 + b \\ a(b - 1) &= 12 + b \end{aligned}$$

$$\begin{aligned} a &= \frac{12+b}{b-1} \Rightarrow a = 14 \\ \Rightarrow a + b &= c \\ 14 + 2 &= 16 = c \end{aligned}$$

Cevap: A

$$\begin{array}{l} 41. \text{ YASAL} \\ \text{YİKAL} \\ \text{SİLAY} \\ \text{KİYAS} \\ \text{SALİY} \end{array} \left. \vphantom{\begin{array}{l} 20348 \\ 24648 \\ 30246 \\ 64802 \\ 60842 \end{array}} \right\} \Rightarrow \dot{i} = 0$$

$\dot{i} = 0$  ise SALİY = 64802

$\Rightarrow S = 6, A = 4, L = 8, Y = 2$

$S = 6$  ve  $\dot{i} = 0$  ise SİLAY = 60842

Cevap: A

$$\begin{array}{r} 3 \ 7 \ 4 \ 1 \quad 3 \ 7 \ 4 \ 1 \quad 3 \ 7 \ 4 \ 1 \\ \star \boxed{-2} \ \triangle \ \textcircled{1} \quad \boxed{-2} \ \star \ \textcircled{1} \ \triangle \quad \triangle \ \textcircled{1} \ \boxed{-2} \ \star \\ \boxed{-2} \quad \textcircled{1} \quad \star \ \textcircled{1} \ \triangle \quad \triangle \ \textcircled{1} \\ + \quad \quad \quad \textcircled{1} \quad + \quad \star \ \textcircled{1} \quad + \\ \hline 2 \ 3 \ 7 \ 4 \quad 1 \ 4 \ 7 \ 7 \quad 9 \ 9 \ 2 \ 0 \end{array}$$

Cevap: E

43.  $a + b = 4$  ve  $a \cdot b = 2$

$$\begin{aligned} \Rightarrow (a + b)^2 &= (4)^2 \Rightarrow a^2 + b^2 + 2ab = 16 \\ a^2 + b^2 + 4 &= 16 \\ a^2 + b^2 &= 12 \end{aligned}$$

Cevap: C

$$\begin{array}{r} 44. \quad \text{ABAB4} \mid \text{AB} \\ \underline{- \text{AB}} \quad \mid 1010 \\ \text{00AB} \quad \mid \Rightarrow 1010 + 4 = 1014 \\ \underline{- \text{AB}} \\ \text{04} \end{array}$$

Cevap: E

$$\begin{aligned} 45. \quad 123 &\rightarrow 1^2 + 3 = 4 \\ 234 &\rightarrow 2^3 + 4 = 12 \\ 345 &\rightarrow 3^4 + 5 = 86 \\ 426 &\rightarrow 4^2 + 6 = 22 \end{aligned}$$

Cevap: D

Cevap: A

$$\begin{array}{c} \begin{array}{ccccccccc} & \times 2 & \times 3 & \times 4 & \times 5 & \times 6 & \times 7 & & \\ \frac{1}{3} & \xrightarrow{\quad} & \frac{2}{4} & \xrightarrow{\quad} & \frac{6}{5} & \xrightarrow{\quad} & \frac{24}{6} & \xrightarrow{\quad} & \frac{120}{7} & \xrightarrow{\quad} & \frac{720}{8} & \xrightarrow{\quad} & \frac{720 \cdot 7}{8+1} \\ & \xrightarrow{+1} & & \xrightarrow{+1} & & \xrightarrow{+1} & & \xrightarrow{+1} & & \xrightarrow{+1} & & \xrightarrow{+1} & \end{array} \\ \Rightarrow \frac{720 \cdot 7}{9} = 80 \cdot 7 = 560 \end{array}$$

Cevap: A

$$\begin{array}{ccc} 47. \quad \begin{array}{c} \text{+} \\ \text{iki çubuk} \\ 4 \text{ yarım çubuk} \\ 1 \text{ kesişim noktası} \\ 4 + 2 = 5 \end{array} & \begin{array}{c} = \\ \text{iki çubuk} \\ 4 \text{ yarım çubuk} \\ 4 \\ 6 + 1 = 7 \end{array} & \begin{array}{c} \times \\ \text{üç çubuk} \\ 6 \text{ yarım çubuk} \\ 1 \text{ kesişim noktası} \\ 6 + 1 = 7 \end{array} \\ \\ \begin{array}{c} \text{Y} \\ \text{üç yarım} \\ 1 \text{ kesişim noktası} \\ 3 + 1 = 4 \end{array} & \begin{array}{c} \neq \\ \text{üç çubuk} \\ 6 \text{ yarım çubuk} \\ 2 \text{ kesişim noktası} \\ 6 + 2 = 8 \end{array} & \end{array}$$

Cevap: E

48.  $K = 5 \Rightarrow \text{KOTRA} = 53287$

|       |   |   |      |   |
|-------|---|---|------|---|
| ORTAK | } | ↔ | 2387 | 5 |
| KOTRA |   |   | 7538 | 2 |
| TORAK |   |   | 5328 | 7 |
| AKORT |   |   | 3827 | 5 |

$O = 3$   
 $T = 2$   
 $R = 8$   
 $A = 7$

$\Rightarrow \text{ROKAT} = 83572$

Cevap: E

50.  $2 * 5 = 2^2 - 5^2 = -21$   
 $3 * 4 = 3^2 - 4^2 = -7$   
 $9 * 6 = 9^2 - 6^2 = 81 - 36 = 45$

Cevap: E

49.

|   |   |   |                          |
|---|---|---|--------------------------|
| 4 | } | ⇒ | (4 + 3 + 2 + 1) . 1 = 10 |
| 1 |   |   |                          |
| 2 |   |   |                          |

|   |   |   |                          |
|---|---|---|--------------------------|
| 6 | } | ⇒ | (6 + 1 + 5 + 3) . 3 = 45 |
| 3 |   |   |                          |
| 5 |   |   |                          |

Cevap: D



*Hedef Başarı ise Adres*

**TASARI**



"Kendine  
güven.  
Bunun da  
üstesinden  
gelebilirsin."

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