

$$① (2a-1) \cdot x - 12 = 0$$

$$x=4 \rightarrow 4 \cdot (2a-1) - 12 = 0$$

$$8a - 4 = 12$$

$$8a = 16$$

$$a = 2$$

Cevap D

$$② \frac{2016-b}{1008-b} - \frac{b}{1008-b}$$

$$\frac{2016-2b}{1008-b}$$

Cevap D

$$\frac{2(1008-b)}{1008-b}$$

$$= 2$$

- ③ Denklemenin kökü 5 olmak zorundadır. $x=3$ ve $x=4$ paydağı sıfır yapmaktadır.

$$\frac{1}{5-a} + \frac{1}{1} + \frac{1}{2} = 1$$
$$\frac{1}{2} = \frac{1}{a-5}$$

Cevap B

$$2 = a - 5$$

$$a = 7$$

④ $5 \cdot (x+1) + x = 3 \cdot (2x-1) + 7$

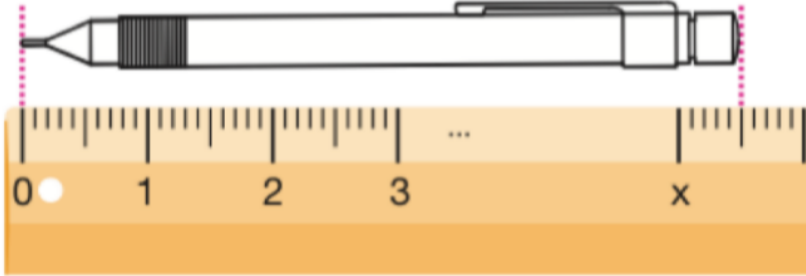
$$5x + 5 + x = 6x - 3 + 7$$

$$5 \neq 4$$

Cevap E

$$G.K = \{ \}$$

5



$$x + 0,5 = \frac{25}{2} - x$$

$$x + \frac{1}{2} = \frac{25}{2} - x$$

$$2x = 12$$

$$x = 6$$

Cevap B

6

(6 ile çarp)

(5 çıkar)

(2 ile çarp)

(7 ile böl)



$$\frac{2 \cdot (6x - 5)}{7} = 14 \Rightarrow$$

$$6x - 5 = 49$$

$$6x = 54$$

$$x = 9$$

Cevap C

tam kare sayıdır,

$$\begin{aligned} \textcircled{7} \quad 4x + 2a - bx &= 5x - 3x + 12 \\ 2x - bx &= 12 - 2a \\ x(2 - b) &= \underline{12 - 2a} \end{aligned}$$

$b = 2$ ve $a = 6$ olur.

$$\textcircled{a - b = 4} \quad \textcircled{\text{Cevap D}}$$

$\textcircled{8}$

$$\begin{aligned} A - C &= 12 \\ A - 3C &= -4 \\ \hline 2C &= 16 \\ C &= 8 \\ A &= 20 \end{aligned}$$

$\textcircled{\text{Cevap C}}$

9

$$(3x - y - 11)^6 + (x + 2y + 1)^4 = 0$$

$$\Rightarrow \begin{array}{l} 3x - y = 11 \\ x + 2y = -1 \end{array}$$

Cevap E

$$\begin{array}{r} 6x - 2y = 22 \\ x + 2y = -1 \\ \hline 7x = 21 \\ x = 3 \wedge y = -2 \end{array}$$

$$x \cdot y = -6$$

10

$$\begin{array}{l} 2 / \frac{2}{x} + \frac{3}{y} = \frac{2}{3} \\ 3 / \frac{1}{x} - \frac{2}{y} = -\frac{1}{4} \\ \hline \frac{4}{x} + \frac{6}{y} = \frac{4}{3} \\ \frac{3}{x} - \frac{6}{y} = -\frac{3}{4} \\ \hline \end{array}$$

Cevap D

$$\frac{7}{x} = \frac{4}{3} - \frac{3}{4}$$

$$\frac{7}{x} = \frac{7}{12} \Rightarrow x = 12$$

II

$$3x + ay + b + 2 = 0$$

$$x - 2y + a = 0$$

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

-6 -6

$$a = -6$$

$$36 = -2(b+2)$$
$$-18 = b+2$$

$$b = -20$$

$$a + b = -26$$

Cevap B

12

$$-2/x + 3y = -1$$

$$2x - y = 5$$

$$-2x - 6y = 2$$

$$2x - y = 5$$

$$-7y = 7$$

$$y = -1$$

$$x = 2$$

$$mx + ny = 0$$

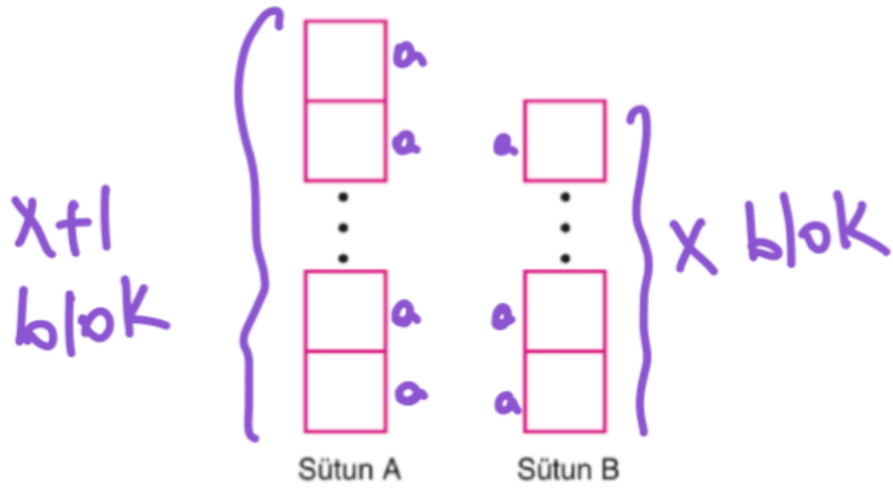
$$2m - n = 0$$

$$2m = n$$

$$\frac{m}{n} = \frac{1}{2}$$

Cevap B

13



I. durum $\rightarrow$ A $\xrightarrow{(1)}$ B
 $(x+1) \cdot a = 72 \Rightarrow 8a = 72$
 $a = 9$

II. durum B $\xrightarrow{(2)}$ A
 $x-2 = \frac{x+3}{2}$

Cevap D

$$2x - 4 = x + 3$$

$$x = 7$$

①

$$6x - \frac{3}{4}(x+14) = 0$$

$$\cancel{6}^2 x = \frac{\cancel{3}}{4} \cdot (x+14)$$

$$8x = x + 14$$

$$7x = 14$$

$$x = 2$$

Cevap E

②

$$\left(y + \frac{2}{3}\right)^{-1} = \frac{6}{3y+8}$$

$$\left(\frac{3y+2}{3}\right)^{-1} = \frac{6}{3y+8}$$

$$\frac{\cancel{3}}{3y+2} = \frac{\cancel{6}^2}{3y+8}$$

$$6y+4 = 3y+8$$

$$3y = 4$$

$$y = \frac{4}{3}$$

Cevap C

3

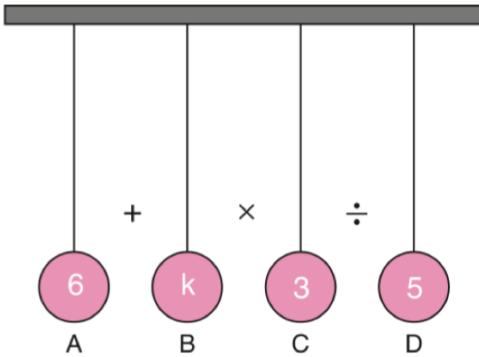
$$mx + 6 = 3x + 1$$

$$x(m-3) + 5 = 0$$

$$G.K = \emptyset \Rightarrow m = 3$$

Cevap E

4



$$\bullet \frac{(6+k) \cdot 3}{5} = 9$$

$$\Rightarrow (6+k) = 15$$

$$\Rightarrow k = 9$$

$$\bullet \bullet \frac{5}{3} \cdot k + 6$$

$$\frac{5}{3} \cdot 9 + 6$$

21

Cevap B

5

$$\begin{array}{r} 2x + y = 8 \\ -2 / x + 3y = 9 \\ \hline -2x - 6y = -18 \\ \hline 2x + y = 8 \\ \hline -5y = -10 \end{array}$$

$$x \cdot y = 6$$

$$y = 2$$

$$x = 3$$

Cevap B

6

$$3x + 2y + a + 1 = 0$$

$$9x + 6y + 4 = 0$$

$$\frac{3}{9} = \frac{2}{6} \neq \frac{a+1}{4}$$

$$\frac{1}{3} \neq \frac{a+1}{4}$$

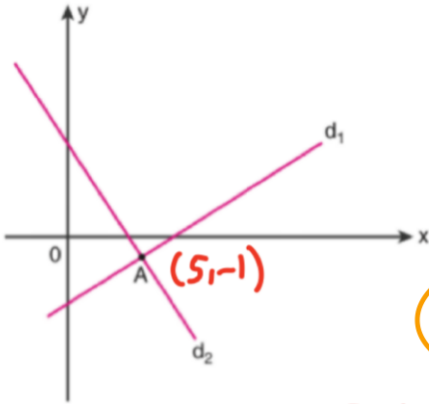
Cevap D

$$4 \neq 3a + 3$$

$$3a \neq 1$$

$$a \neq \frac{1}{3}$$

7



Cevap D

$$3x - y = a \Rightarrow 15 + 1 = a$$

$$\Rightarrow \underline{a = 16}$$

$$x + by = 3 \Rightarrow 5 - b = 3$$

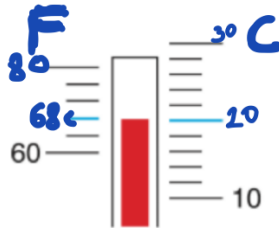
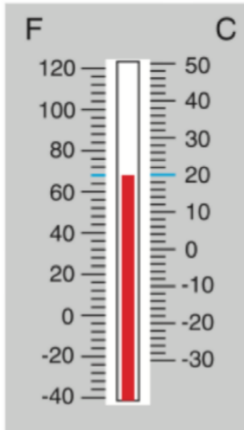
$$\underline{b = 2}$$

$$\underline{a - b = 14}$$

Şekil 1

Şekil 2

8



k sabit bir sayı olmak üzere, fahrenheit ve santigrad değerleri arasında,

$$C = \frac{5}{9} \cdot (F - k)$$

$$20 = \frac{5}{9} (68 - k)$$

$$36 = 68 - k$$

$$\underline{k = 32}$$

Cevap B

9 $S(A_5) \cdot S(A_{n-1}) = S(A_{49})$

$$4 \cdot (n-2) = 48$$

$$n-2 = 12$$

Cevap C

$$n = 14$$

10

$$a + (b \cdot c) = (a+b) \cdot (a+c)$$

$$a + b \cdot c = a^2 + ac + ab + bc$$

$$1 = a + c + b$$

Cevap D

11

1	→	2	→	3
↑				↓
8				4
↑				↓
7	←	6	←	5

$$5^2 - 3^2$$

$$(5 \times 5) - (3 \times 3)$$

Gevredeki
Kare sayısını
verir.

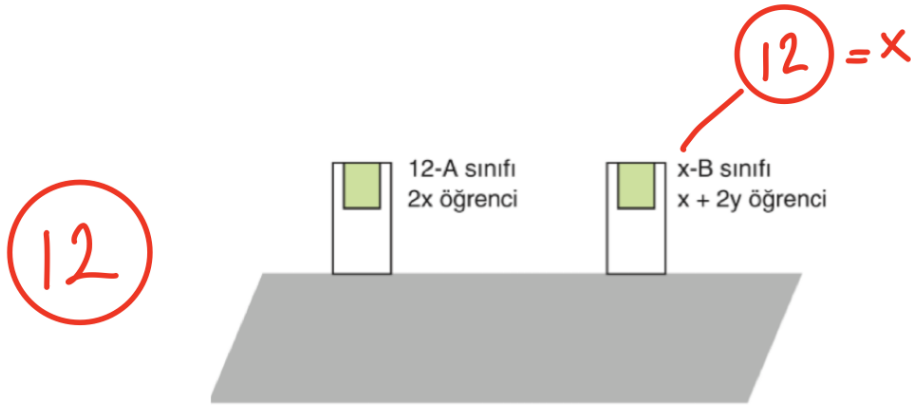
$5^2 - 3^2 = 16$ dir.
Yarısı gri, yarısı
beyazdır.

Dolayısıyla; $\frac{n^2 - (n-2)^2}{2} = 148$

$$2n - 2 = 148$$

Cevap D

$$n = 75$$



$$2x = x + 2y$$

$$2y = 12 + 2y$$

$$12 = 2y$$

$$y = 6$$

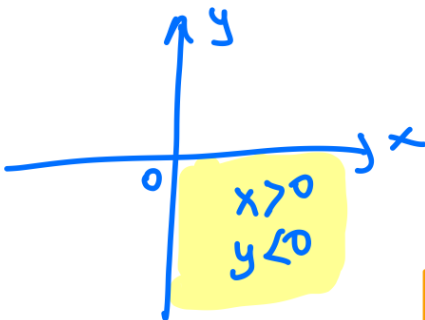
Cevap C

13

$$2x = 12 + y$$

$$x = \frac{12 + y}{2}$$

noktalar
4. bölgede ise



$$y = -2 \quad x = 5$$

$$y = -4 \quad x = 4$$

$$y = -6 \quad x = 3$$

$$y = -8 \quad x = 2$$

$$y = -10 \quad x = 1$$

Cevap C

①

$$5\left(x + \frac{4}{5}\right) + x = 6 \cdot \left(x + \frac{4}{6}\right)$$

$$5x + 4 + x = 6x + 4$$

$$6x + 4 = 6x + 4$$

$$\text{G.K.} = \mathbb{R}$$

Cevap D

②

$$2/5a + 3b = 1$$

$$-5/2a + 5b = -11$$

$$10a + 6b = 2$$

$$-10a - 25b = 55$$

$$-19b = 57$$

$$b = -3$$

$$a = 2$$

Cevap D

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

3

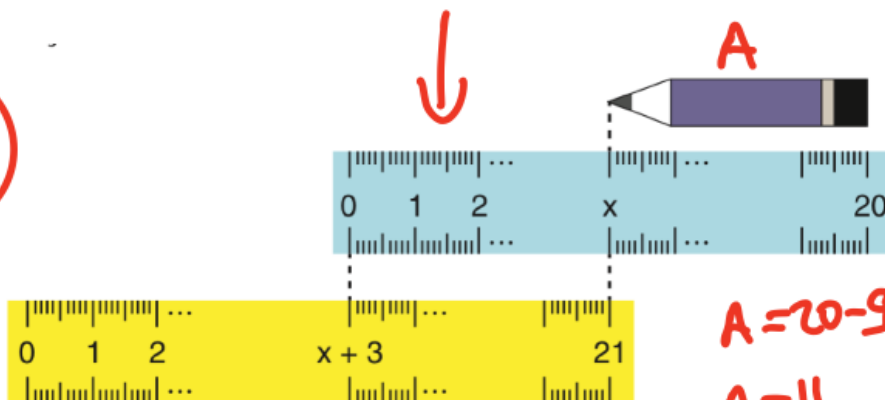
$$\begin{aligned} 4x + ay + 4 - 2a &= 0 \\ 3x + 4y - 6 &= 0 \end{aligned}$$

$$\frac{4}{3} \neq \frac{a}{4}$$

$$a \neq \frac{16}{3}$$

Cevap C

4



$$A = 20 - 9$$

$$A = 11$$

$$x = 21 - x - 3$$

$$2x = 18$$

$$x = 9$$

Cevap B

5

Öğretmen

$$(x+y) \cdot z = 14$$

14	1
7	2
2	7
1	14

Elif

$$(x \cdot y) + z = 14$$

13	1
12	2
7	7
0	14

$x \cdot y = 13$ $x + y = 14$ $x = 13 \wedge x = 1$
 $x \cdot y = 12$ $x + y = 7$ $x = 3 \wedge x = 4$

$$13 + 3 + 1 + 4 = 21$$

Cevap E

6

Aykut : $2x$, $x + 8$ Korkut : $x + 3$, y

$$\frac{x+8}{2} = x+3 \quad \text{ve} \quad \frac{2x}{2} = y$$

$$x = y$$

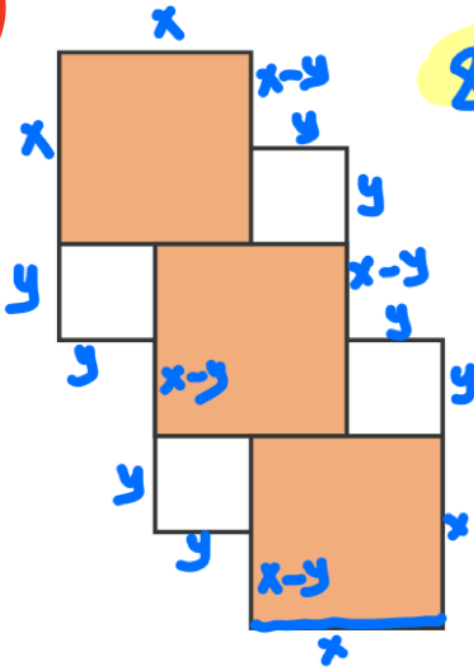
$$\frac{y+8}{2} = y+3$$

$$y+8 = 2y+6$$

$$y = 2$$

Cevap A

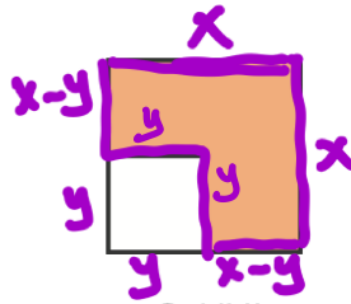
7



Şekil I

$$8x + 4y = 64$$

$$4x = 28$$



Şekil II

$$4x = 28$$

$$x = 7$$

$$8x + 4y = 64$$

$$2x + y = 16$$

$$14 + y = 16$$

$$y = 2$$

Cevap B

Sol yan

8

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

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

Cevap D

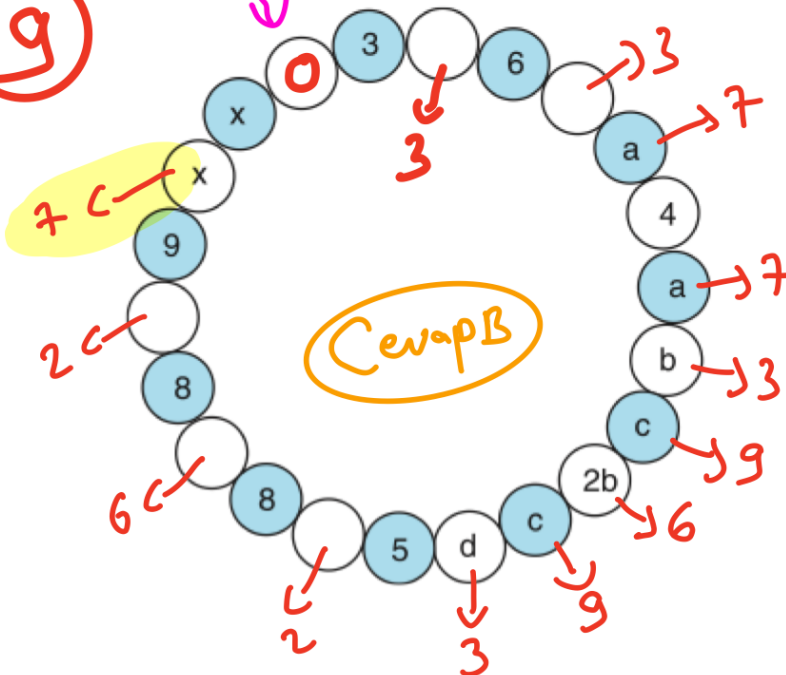
$$2X-2 = 2X-1$$

$$-2 = -1$$

 $\emptyset$ Sol yanının
yanısının
 $\frac{X}{2}$ farkı

9

Başla



10) $2x-70$ kat sayısı
 x tam sayısı

$$4(2x-70) = x$$

$$8x-280 = x$$

$$7x = 280$$

$$x = 40$$

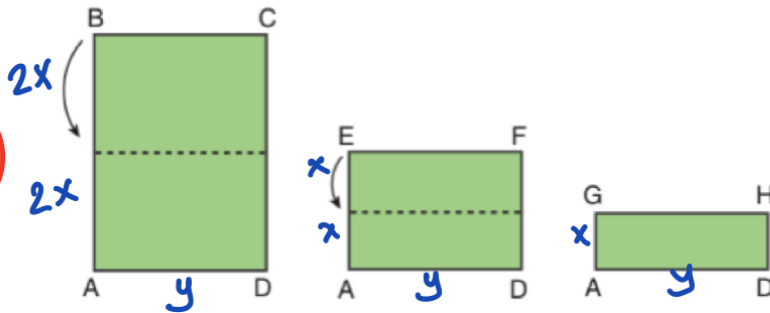
$$\text{Kat sayısı } 2 \cdot 40 - 70 = 10$$

$$1 + 0 = \textcircled{1}$$

Cevap A

Tam tersini
 yaptığınızda
 sıfır kat
 çıkar.
 x

11



$$2x + 2y = 23$$

$$8x + 2y = 47$$

$$6x = 24$$

$$x = 4 \text{ ve } y = \frac{15}{2}$$

Cevap D

$$A(ABCD) = 4x \cdot y$$

$$= 16 \cdot \frac{15}{2}$$

$$= \textcircled{120}$$

12

renksiz bölgedeki
en küçük iki
sayı

	x	x+1	x+2	x+3	x+4	x+5	x+6	x+7	x+8	x+9
1	x+1									x+10
1	x+2									x+11
1										x+12
1										x+13
1										x+14

renkli böl.
en büyük
sayırenksiz bölgedeki
en büyük sayı

$$x + x + 1 = x + 13$$

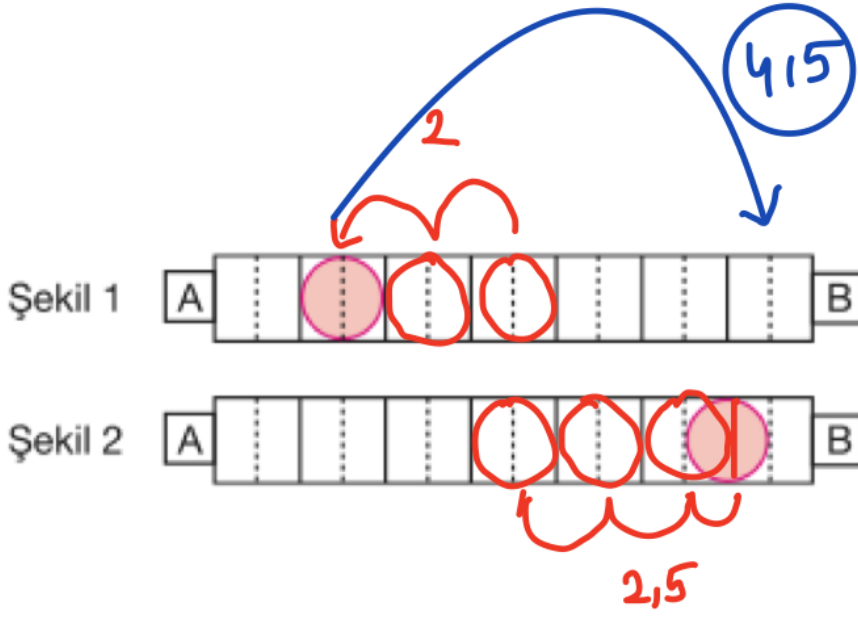
$$x = 12$$

Cevap B

$$12 + 14 = 26$$

$$2 + 6 = \underline{\underline{8}}$$

13



Cevap C

$$2x - 4 = 4,5$$

$$2x - 4 = \frac{9}{2}$$

$$2x = \frac{17}{2} \quad x = \frac{17}{4}$$

14

$$I. 3x + 2y = 9$$

$$II. x - y = 1$$

$$III. x - 2y = -5$$

$$\bullet x - 2y = -5 \quad III \text{ ile aynı}$$

$$\bullet 3x + 2y = 9 \quad I \text{ ile aynı}$$

$$\begin{array}{r} I - II \rightarrow \\ 3x + 2y = 9 \\ x - y = 1 \\ 2x - 2y = 2 \\ \hline 5x = 11 \\ x = \frac{11}{5} \end{array}$$

$$\begin{array}{r} I - III \rightarrow \\ 3x + 2y = 9 \\ x - 2y = -5 \\ \hline 4x = 4 \\ x = 1 \quad y = 3 \\ 1 + 3 = 4 \end{array}$$

Cevap D

1

$$a \begin{cases} b = 2a + b \text{ ve} \end{cases}$$

$$a \begin{cases} b = 2b - a \end{cases}$$

$$\begin{array}{c} \uparrow \\ 4 \end{array} \begin{array}{c} \uparrow \\ 3 \end{array} \begin{array}{c} \uparrow \\ 2 \end{array} \begin{array}{c} \uparrow \\ m \end{array} = 5$$

$\downarrow$
 $2m-2$

$$2(2m-2) - 11 = 5$$

$$2(2m-2) - 11 = 5$$

$$2m - 2 = 8$$

$$2m = 10$$

$$m = 5$$

Cevap D

2

$$\frac{x}{n} - m = x - \frac{m}{n}$$

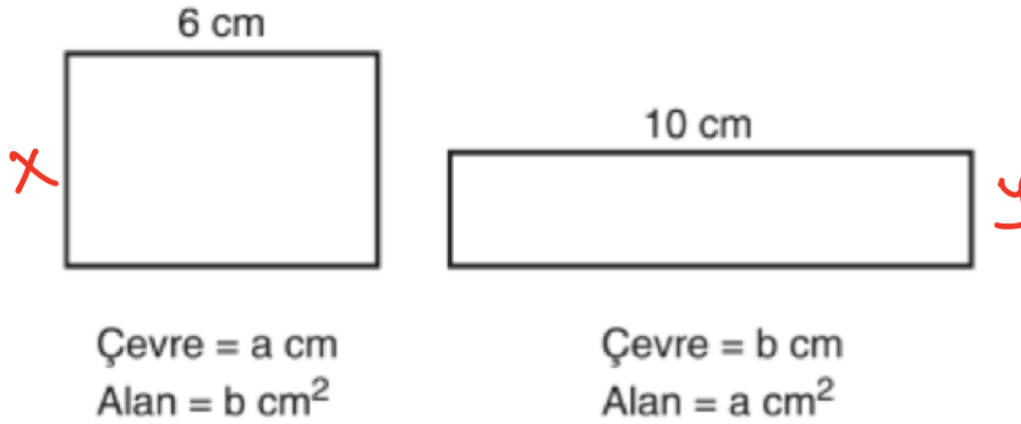
$$\frac{x}{n} - x = m - \frac{m}{n}$$

$$x \left(\frac{1}{n} - 1 \right) = m \left(1 - \frac{1}{n} \right)$$

$$x = -m$$

Cevap A

③



$$\begin{aligned} 12 + 2x &= a \\ 6x &= b \end{aligned} \quad \begin{aligned} &\rightarrow 20 + 2y = b \\ &\rightarrow 10 \cdot y = a \end{aligned}$$

$$\begin{aligned} 12 + 2x &= 10y &\Rightarrow 6 + x &= 5y \\ 6x &= 20 + 2y &\Rightarrow 3x &= 10 + y \\ &&&y = 3x - 10 \end{aligned}$$

$$6 + x = 5(3x - 10)$$

$$6 + x = 15x - 50$$

$$(x = 4)$$

Cevap B

$$a = 20$$

$$b = 24$$

$$a + b = 44$$

4



$$x + 20 = 2x - 10$$
$$x = 30$$

~~$$2x - 10 = x - 2$$
$$x = -8$$~~

$$\Rightarrow x + 20 = 50$$

Cevap D

5

$$2x + y = 410$$

$$\Rightarrow 2x + 3y = ?$$

$$x + 2y = 370$$

$$-2x - 4y = -740$$

$$\begin{array}{r} 2x + y = 410 \\ \hline -2x - 4y = -740 \\ \hline -3y = -330 \end{array}$$

$$y = 110$$

$$x = 150$$

$$2 \cdot 150 + 3 \cdot 110$$

$$300 + 330$$

$$630$$

Cevap D

6

$${}_a^b X: ax + b$$

$${}_a^{a-k} X + {}_{a-k}^{a+k} X$$

Cevap E

$$= (a+k)x + a-k + (a-k)x + a+k$$

$$= \cancel{ax} + \cancel{kx} + \cancel{a-k} + \cancel{ax} - \cancel{kx} + \cancel{a+k}$$

$$= 2ax + 2a = \frac{2a}{2a} \times$$

7

X Kutuya 3'er top
Konulmuş olsun. Toplamda y kutu
olsun.
Topların sayısı $3x$ olur.
Boş kutuların sayısı $y-x$ dir.

$$3x = x + 20 = y - x + 10$$

$$x = 10$$

$$30 = y - 10 + 10$$

$$y = 30$$

Kutuların $\frac{1}{3}$ 'ü doludur.

Cevap B

$$\textcircled{8} \quad ax+b$$

$$\underline{\text{Eda}} \rightarrow 3x+3$$

$$\underline{\text{Seda}} \rightarrow 4x+4$$

$$2(3x+3)=4x+4$$

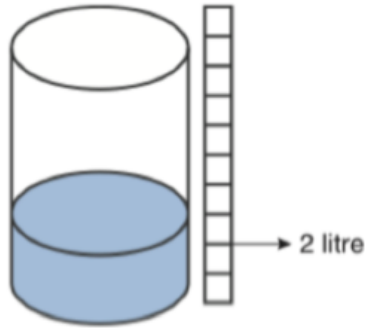
$$6x+6=4x+4$$

$$2x=-2$$

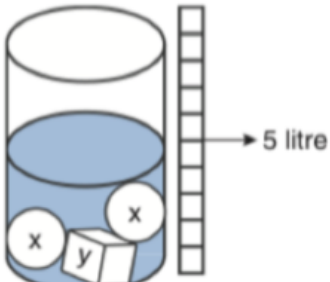
$$\textcircled{x=-1}$$

Cevap B

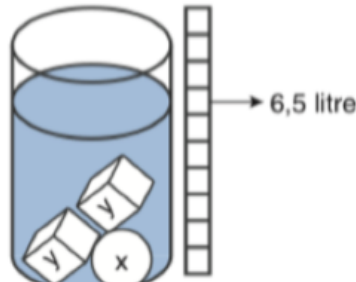
9



I. Şekil



II. Şekil



III. Şekil

$$2x + y = 3 \quad \Rightarrow \quad 2 + y = ?$$

$$-2 / x + 2y = 4,5$$

$$2 + 2 = 4$$

$$2x + y = 3$$

$$-2x - 4y = -9$$

$$-3y = -6$$

$$y = 2$$

Cevap C

10

Sarı $\rightarrow 5Sn$

Yeşil $\rightarrow X$

Kırmızı $\rightarrow \frac{3x}{2}$

$$5 + x + \frac{3x}{2} = y$$

Cevap A

$$10 + 2x + 3x = 2y$$

$$5x - 2y + 10 = 0$$