

$$1. \left( \frac{1}{1} + \frac{1}{2} - \frac{1}{6} \right) : \left( \frac{1}{3} - \frac{1}{9} \right)$$

$$\Rightarrow \left( \frac{6}{6} + \frac{3}{6} - \frac{1}{6} \right) : \left( \frac{3}{9} - \frac{1}{9} \right)$$

$$\Rightarrow \frac{8}{6} : \frac{2}{9} = \frac{8}{6} \cdot \frac{9}{2} = 6$$

Cevap: E

$$2. \frac{4 \cdot 10^{-7} + 2 \cdot 10^{-7}}{1,2 \cdot 10^{-7}}$$

$$= \frac{10^{-7} \cdot (4 + 2)}{1,2 \cdot 10^{-7}} = \frac{6}{1,2} = \frac{60}{12}$$

$$= 5$$

$$3. \begin{array}{l} -3 \cdot 5^x - 4 \cdot 2^y = -107 \\ 4 \cdot 5^x + 5 \cdot 2^y = 140 \end{array}$$

$$\begin{array}{l} 5^x + 2^y = 33 \quad x = 2 \quad y = 3 \\ x \cdot y = 2 \cdot 3 = 6 \end{array}$$

$$4. \sqrt{45} + \frac{4}{7 + 3\sqrt{5}} = 3\sqrt{5} + \frac{4}{7 + 3\sqrt{5}}$$

$$(7 - 3\sqrt{5})$$

$$3\sqrt{5} + \frac{4}{7 + 3\sqrt{5}}$$

$$(7 - 3\sqrt{5})$$

$$\Rightarrow 3\sqrt{5} + \frac{4 \cdot (7 - 3\sqrt{5})}{49 - 45}$$

$$\Rightarrow 3\sqrt{5} + \frac{4 \cdot (7 - 3\sqrt{5})}{4}$$

$$\Rightarrow 3\sqrt{5} + 7 - 3\sqrt{5} = 7$$

Cevap: A

$$5. (\sqrt{x} \cdot \sqrt{y})^2 = \left( \frac{4}{3} \right)^2 \Rightarrow x \cdot y = \frac{16}{9}$$

$$\left( \frac{\sqrt{y}}{\sqrt{x}} \right)^2 = 2^2 \Rightarrow \frac{y}{x} = 4$$

$$\Rightarrow y = 4x$$

$$x \cdot y = \frac{16}{9} \Rightarrow x \cdot 4x = \frac{16}{9}$$

$$\Rightarrow x^2 = \frac{4}{9} \Rightarrow x = \frac{2}{3}$$

$$y = 4x \Rightarrow y = 4 \cdot \frac{2}{3}$$

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

$$x + y = \frac{2}{3} + \frac{8}{3} = \frac{10}{3}$$

Cevap: B

Cevap: B

$$6. \left( \frac{a}{a-1} + \frac{1}{a^2-1} \right) \cdot \frac{a^2-2a+1}{a^2-1} = ?$$

$$\left( \frac{a^2+a}{a^2-1} + \frac{1}{a^2-1} \right) \cdot \frac{(a-1)^2}{(a-1) \cdot (a^2+a+1)}$$

$$= \frac{a^2+a+1}{a^2-1} \cdot \frac{(a-1)^2}{(a-1) \cdot (a^2+a+1)}$$

$$= \frac{(a-1)^2}{(a-1) \cdot (a+1) \cdot (a-1)} = \frac{1}{a+1}$$

Cevap: C

Cevap: D

$$7. \frac{3 \cdot (n-33)}{120} = \frac{n-33}{40}$$

n - 33 sayısı 40'in katı olmalı

$$n - 33 = 40k \quad n = 40k + 33$$

$$\begin{array}{r} 33 \mid 5 \\ - \\ \hline 3 \end{array}$$

Cevap: D

8.  $a = -2$ ,  $b = -\frac{1}{2}$ ,  $c = \frac{1}{2}$  olsun.

I.  $\frac{a}{b} < 1 \Rightarrow \frac{-2}{-\frac{1}{2}} < 1 \Rightarrow 4 < 1$  yanlış.

II.  $b \cdot c < a \Rightarrow -\frac{1}{2} \cdot \frac{1}{2} < -2$   
 $\Rightarrow -\frac{1}{4} < -2$  yanlış.

III.  $-2 + \left(-\frac{1}{2}\right) < -1 \Rightarrow -\frac{5}{2} < -1$  doğru.

Cevap: B

9.  $a < b < 0$  için

$|3a - 2b| = 11 \Rightarrow -3a + 2b = 11$   
negatif

$|b - 2a| = 8 \Rightarrow -2 / b - 2a = 8$   
pozitif

$$-3a + 2b = 11$$

$$-2b + 4a = -16$$

$$a = -5$$

$$b - 2a = 8$$

$$b - 2(-5) = 8$$

$$b = -2$$

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

$$= -7$$

10.  $\frac{1.}{3k} + \frac{2.}{6k} + \frac{3.}{9k} \rightarrow 18k$

3 yıl sonra  $6m + 9m + 12m \rightarrow 27m$

$$18.k = 27.m$$

$$2k = 3m$$

$$6m - 3k = 15 \quad 18.15 = 270$$

$$4k - 3k = 15$$

$$k = 15$$

Cevap: A

11. Poğaç = 50 gr un + 20 gr peynir

Börek = 40 gr un + 30 gr peynir

2 poğaç = 100 gr un + 40 gr peynir

2P + B = 140 un + 30 gr peynir

1 tabak

7 tabak 980 gr un + 490 gr peynir

Cevap: B

12. Deniz başlangıçta x TL olsun

$$x \cdot \frac{2}{3} \cdot \frac{3}{5} = 30$$

$$x = 75$$

Cevap: D

13. 1. kamyon = A

2. kamyon = B

3. kamyon = C

$$\frac{B}{A} = \frac{3}{4} \quad \frac{C}{B} = \frac{2}{3}$$

$$\frac{A}{4x} \quad \frac{B}{3x} \quad \frac{C}{2x}$$

$$5(4x - 2x) = 30$$

$$10x = 30 \Rightarrow x = 3$$

$$B = 3x \Rightarrow B = 9$$

Cevap: B

14.  $\begin{array}{ccc} 25 & 20 & 23 \\ \text{O} & \text{O} & \text{O} \\ 60 & x & x + 60 \end{array}$

$$60.25 + 20x = 23x + 60.23$$

$$3x = 60.25 - 60.23$$

$$3x = 60(25 - 23)$$

$$3x = 60.2$$

$$x = 40$$

$$\text{Toplam} = 60 + 40 = 100$$

Cevap: E

15. Aysu saatte x birim iş yapsın

$$A = 2x$$

Özlem saatte y birim iş yapsın

$$B = 6y$$

$$3,6(x + y) = 2x + 6y$$

$$3,6x + 3,6y = 2x + 6y \quad \frac{6y}{x} = ?$$

$$1,6x = 2,4y$$

$$2x = 3y \quad x = 3k \quad y = 2k \quad \frac{12k}{3k} = 4$$

Cevap: B

16.  $1200 + 360 + 150 + 90 = 1800$

$$\begin{array}{r} 360^\circ \quad 1800 \\ x \quad 360 \\ \hline x = 72 \end{array}$$

Cevap: D

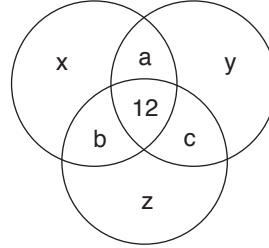
17.  $4(x - 1) + (x - 2) + (x - 3) = 69$

$$6x = 78$$

$$x = 13$$

Cevap: B

18.  $\begin{array}{ccc} \text{I} & \text{II} & \text{III} \\ 40 & 40 & 40 \end{array}$



$$a + b + c = 32$$

$$x + a + b = 28$$

$$y + a + c = 28$$

$$2 + b + c = 28$$

$$x + y + z + 2(a + b + c) = 84$$

$$20 \quad 32$$

$$x + y + z = 20$$

Cevap: D

TASARI AKADEMI YAYINLARI

19.  $9(9) = \sqrt{9} + 2 = 5$

$$8(5) = 25k + 1 = 6$$

$$(f \circ g)(9) = 25k + 1 = 6$$

$$k = \frac{1}{5}$$

$$f(2) = \frac{4}{5} + 1 = \frac{9}{5}$$

Cevap: C

Cevap: B

Cevap: D

20.  $(2 \blacktriangle 3) + (3 \blacktriangle 2) = (a \blacktriangle b) + 2$

↓

$$(2^3 + 1) + (2^3 + 2) = (a \blacktriangle b) + 2$$

$$17 = a \blacktriangle b$$

$$17 = a^b + 1$$

$$a = 2 \quad b = 4 \quad (b \blacktriangle 3) = (4 \blacktriangle 3) = 3^4 + 2 = 83$$

Cevap: E

21.  $\frac{2}{6} \cdot \frac{1}{5} = \frac{1}{15}$ 

$$\frac{2}{6} \cdot \frac{1}{5} = \frac{1}{15}$$

Cevap: C

22. I. arasinav

%30

$$20 \cdot \frac{30}{100} = 6 \text{ puan}$$

I. + II. + Final = 55

III. final

%40

$$100 \text{ alsa} \Rightarrow 100 \cdot \frac{40}{100} = 40 \text{ puan}$$

Cevap: B

23. I. arasinav

100x

↓

30x

II. arasinav

100x + 20

↓

30x + 6

final

60

↓

24 = 72

$$x = \frac{7}{10}$$

$$100x = 100 \cdot \frac{7}{10} = 70$$

Cevap: D

24.

128	A	72	
72	B	56	
56	C	D	16
16	E	F	8
8	G	0	0

G = 8

Cevap: D

25.

48	A	18	
18	B	C	12
12	D	E	
6	0		

A = 18

Cevap: E