

$$1. \frac{\left(\frac{1}{10}\right)^{-1} + \left(\frac{2}{10}\right)^{-1}}{\left(\frac{5}{100}\right)^{+1}} = \frac{\frac{10}{1} + \frac{10}{2}}{\frac{100}{5}} = \frac{10+5}{20} = \frac{15}{10} = \frac{3}{4}$$

Cevap: B

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

$$= 2^3 - 1 = 8 - 1 = 7$$

Cevap: B

$$3. \begin{aligned} 13.B1 + 4 &= A2B \\ 13(10B + 1) + 4 &= 100A + 20 + B \\ 130B + 17 &= 100A + 20 + B \\ 129B - 100A &= 3 \\ B = 7 \quad A = 9 \quad A + B &= 16 \end{aligned}$$

Cevap: E

$$4. \frac{(n+1) \cdot n(n-1)! + (n-1)!}{n^3 - 1} = \frac{((n+1) \cdot n + 1)(n-1)!}{(n-1) \cdot (n^2 + n + 1)}$$

$$= \frac{(n^2 + n + 1)(n-1)!}{(n-1)(n^2 + n + 1)}$$

$$= (n-2)! = 24 = 4!$$

$$n - 2 = 4$$

$$n = 6$$

Cevap: C

$$5. a^2 - 2ab - 3b^2 = 0$$

$$\begin{array}{ccc} a & & -3b \\ & \times & \\ a & & b \end{array}$$

↓

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

0 olmalı a ve b pozitif olduğu için

$$a - 3b = 0$$

$$a = 3b$$

$$\frac{a+b}{a-b} = \frac{3b+b}{3b-b} = \frac{4b}{2b} = 2$$

Cevap: A

$$6. \frac{4}{a} = \frac{b}{3} = \frac{a}{9}$$

$$\frac{4}{a} \times \frac{a}{9} \quad a^2 = 36$$

$$a = 6$$

$$\frac{b}{3} = \frac{6}{9} = \frac{2}{3}$$

$$b = 2$$

$$a + b = 6 + 2 = 8$$

Cevap: A

$$7. AB = 5a + 2 = 6b + 4$$

$$+8 \quad +8 \quad +8$$

$$AB + 8 = 5a + 10 = 6b + 12$$

$$\text{okek}(5.6) = 30k$$

$$AB + 8 = 30$$

$$AB + 8 = 30 \quad AB = 22$$

$$AB + 8 = 60 \quad AB = 52$$

$$AB + 8 = 90 \quad AB = +82$$

$$156$$

Cevap: B

8. A 4 + 6 = 10 gr karışımda

4 gr tuz %40

$$\begin{array}{|c|} \hline \%40 \\ \hline 20 \\ \hline \end{array} + \begin{array}{|c|} \hline \%x \\ \hline 30 \\ \hline \end{array} = \begin{array}{|c|} \hline \%52 \\ \hline 50 \\ \hline \end{array}$$

$$20 \cdot 40 + 30x = 50 \cdot 52$$

$$3x = 180$$

$$x = 60 \Rightarrow \frac{9}{9+a} = \frac{60}{100}$$

$$9 + a = 15$$

$$a = 6$$

$$\frac{9}{a+9} \times \frac{3}{5}$$

$$3a + 27 = 45$$

$$3a = 18$$

$$a = 6$$

Cevap: B

9.  $x \cdot 20 \rightarrow$  yol

$$\frac{10V}{5V} + \frac{10V}{x} = 20$$

$$\frac{10V}{x} = 18 \quad x = \frac{10V}{18} = \frac{5V}{9}$$

10. Her birinin 1 gündeki hızı V olsun.

1. gün 2. gün 3. gün 4. gün 5. gün 6. gün

$$V + 2V + 3V + 4V + 5V + 6V = 21V \rightarrow \text{iş}$$

$$\frac{21V}{6V} = 3,5$$

Cevap: C

11. Ali Cem

$$\begin{array}{cc} x & 48-x \\ 48-x & 21 \end{array}$$

$$21 + x = 96 - 2x$$

$$3x = 75$$

$$x = 25$$

Cevap: B

TASARI AKADEMİ YAYINLARI

12. 18 şarkıda 17 mola

$$17 \cdot 2 = 34 \text{ dk}$$

$$100 - 34 = 66$$

$$\frac{5 \text{ dk}}{x} \quad \frac{3 \text{ dk}}{18-x}$$

$$x5 + (18-x) \cdot 3 = 66$$

$$5x + 54 - 3x = 66$$

$$2x = 12$$

$$x = 6$$

Cevap: B

13.  $f(1) = f(4) = f(7) \Rightarrow f(1) = 2 + 1 = 3$

$$f(7) = 3$$

$f(2) = f(5) = f(8) \Rightarrow f(12) = 4 + 1 = 5$

$$f(8) = 5$$

$f(3) = f(6) \Rightarrow f(3) = 6 + 1 = 7$

$f(6) + f(7) + f(8) = 7 + 3 + 5 = 15$

Cevap: C

14.  $\underline{1} \rightarrow 1$  elemanlı 1 tane  
 $\underline{2} \dots \rightarrow 2$  elemanlı  $\binom{5}{1} = 5$  tane  
 $\underline{3} \dots \rightarrow 3$  elemanlı  $\binom{5}{2} = 10$  tane  
 $\underline{4} \dots \rightarrow 4$  elemanlı  $\binom{5}{3} = 10$  tane  
 $\underline{5} \dots \rightarrow 5$  elemanlı  $\binom{5}{4} = 5$  tane  
 $\underline{6} \dots \rightarrow 6$  elemanlı  $+\binom{5}{5} = 1$  tane
- 
- 32 tane

Cevap: C

15.  $21.15 - 12.00 = 9$  saat 15 dk  
 $9.60 + 15 = 555$  dk  
 $555.4 = 2220.50 = 37$  dk geri kaldı.  
 $21.15$ 'ten 37 dk gerisi,  $20.38$ 'dir.

Cevap: E

16.  $a_1 + 4r = a_5$   
 $12 + 45 = 12 + 20 = 32 = a_5$

Cevap: E

17.  $a_5 + 14r = a_{15}$   
 $8 + 14r = 106$   
 $14r = 98$   
 $r = 7$

Cevap: C

18.  $a_1 = 4$   
 $a_5 = 4 + 4r$   
 $a_8 = 4 + 7r$   
 $(4 + 4r).2 = 4 + 7r$   
 $8 + 8r = 4 + 7r$   
 $-r = 4$   
 $r = -4$

Cevap: E

19.  $A - 595 - E$   
 $A + 5.2 + 9.3 + 5.4 = 57 + A$   
 $A = 1$  için  $E = 8$   
 $A = 2$  için  $E = 9$   
 $A = 3$  için  $E = 0$   
 $A + B = 2 + 9 = 11$  max

Cevap: D

20.  $3 + 2.2 + x.3 + 1.4 = 11 + 3x$

$$11 + 3x = 10k + 8$$

$$3 + 3x = 10k$$

$$\boxed{x = 9}$$

Cevap: E

21. 

1	2	3	4	5	6
↓	↓	↓	↓	↓	↓
$9.2 = 18$	9	$4.2 = 8$	7	$1.2 = 2$	5
$1 + 8 = 9$					
7	8	9			
↓	↓	↓			
$6.2 = 12$	2	$4.2 = 8$			
$9 + 9 + 8 + 7 + 2 + 5 + 3 + 2 + 8 = 53$					
$53 \equiv 3 \pmod{10}$					

Cevap: B

