

1.  $40a + 33b + 43c = 293$

$$\Rightarrow 40(\underbrace{a + b + c}_8) + 3c - 7b = 293$$

$$320 + 3c - 7b = 293$$

$$3c - 7b = 293 - 320$$

$$3c - 7b = -27$$

Cevap: B

2.  $m^2.n + 5m = 60$

$$m(m.n + 5) = 60 \quad (m.n = 15)$$

$$m.(15 + 5) = 60$$

$$20.m = 60 \quad \Rightarrow \quad m = 3 \text{ olur.}$$

Cevap: B

3. •  $m + \frac{4m}{n} = \frac{m+54}{n}$

$$\frac{m.n + 4m}{n} = \frac{m+54}{n}$$

$$m.n + 4m = m + 54 \quad (m.n = 18)$$

$$18 + 4m = m + 54$$

$$3m = 36 \quad \Rightarrow \quad m = 12$$

•  $m.n = 18$

$$12.n = 18 \quad \Rightarrow \quad n = \frac{18}{12} = \frac{3}{2} \text{ olur.}$$

Cevap: B

4.  $\frac{k}{6n} + \frac{k}{6n} = \frac{kn + km}{6mn} = \frac{k(m+n)}{6mn} = \frac{k.42}{6.k} = 7 \text{ olur.}$

Cevap: D

5.  $ab + c = 45$

$$- \quad a + bc = 25$$

$$ab - bc + c - a = 20$$

$$b(a - c) - (a - c) = 20$$

$$(a - c)(b - 1) = 20$$

$$(a - c) = 5$$

$$5.(b - 1) = 20$$

$$b - 1 = 4$$

$$b = 5 \text{ olur.}$$

Cevap: C

6. •  $y + z = \frac{2}{5} \Rightarrow y + \frac{1}{15} = \frac{2}{5}$

$$y = \frac{2}{5} - \frac{1}{15} = \frac{5}{15} = \frac{1}{3}$$

•  $x.y.z = 1$

$$x \cdot \frac{1}{3} \cdot \frac{1}{15} = 1 \Rightarrow x = 45$$

Cevap: E

x	a	b	c
a			
b	24		
c		48	

$$\Rightarrow a.b = 24$$

$$+ \quad b.c = 48$$

$$a.b + b.c = 72$$

$$b(a + c) = 72$$

+	a	b	c
a			
b		d	
c	12		

$$\Rightarrow a + c = 12$$

$$2b = d$$

$$\Rightarrow b.(a + c) = 72 \quad (a + c = 12)$$

$$b.12 = 72 \Rightarrow b = 6$$

$$2b = d \Rightarrow d = 12 \text{ olur.}$$

Cevap: E

$$8. \cdot \frac{x+y}{7x} - \frac{x+y}{7y} = 4$$

$$\frac{1}{7} + \frac{y}{7x} - \frac{x}{7y} - \frac{1}{7} = 4$$

$$\frac{1}{7} \left( \frac{y}{x} - \frac{x}{y} \right) = 4 \Rightarrow \frac{y}{x} - \frac{x}{y} = 28$$

$$\cdot \frac{y-4x}{4x} - \frac{x-4y}{4y}$$

$$= \frac{y}{4x} - \frac{4x}{4x} - \frac{x}{4y} + \frac{4y}{4y}$$

$$= \frac{y}{4x} - 1 - \frac{x}{4y} + 1$$

$$= \frac{y}{4x} - \frac{x}{4y}$$

$$= \frac{1}{4} \left( \frac{y}{x} - \frac{x}{y} \right) = \frac{28}{4} = 7 \text{ olur.}$$

Cevap: C

$$9. \cdot \frac{x}{y} = \frac{4-x}{3y} \Rightarrow 3x = 4-x$$

$$4x = 4 \Rightarrow x = 1$$

$$\cdot \frac{x}{y} = 5x - 3 \quad (x = 1)$$

$$\frac{1}{y} = 5 - 3 \Rightarrow \frac{1}{y} = 2 \text{ ve } y = \frac{1}{2} \text{ olur.}$$

O halde  $x + y = 1 + \frac{1}{2} = \frac{3}{2}$ 'dir.

Cevap: E

$$10. \cdot \frac{a}{b} = c \Rightarrow b \cdot c = a$$

$$\cdot \frac{a+c}{b+16} = \frac{c}{b}$$

$$\frac{b \cdot c + c}{b+16} = \frac{c}{b}$$

$$\frac{c(b+1)}{b+16} = \frac{c}{b}$$

$$b(b+1) = b+16$$

$$b^2 + b = b+16$$

$$b^2 = 16 \Rightarrow b = 4 \text{ olur.}$$

Cevap: D

$$11. \frac{a^2+12}{a \cdot b} = \frac{a}{b} + 2c$$

$$\frac{a^2}{a \cdot b} + \frac{12}{a \cdot b} = \frac{a}{b} + 2c$$

$$\frac{a}{b} + \frac{12}{ab} = \frac{a}{b} + 2c$$

$$\frac{12}{a \cdot b} = 2c$$

$$2abc = 12$$

$$a \cdot b \cdot c = 6 \text{ olur.}$$

Cevap: C

$$12. \cdot m - n = k \Rightarrow n + k = m$$

$$m - k = n$$

$$\cdot \frac{5m}{n+k} + \frac{m-k}{2n} + \frac{5x}{8} = \frac{21}{2}$$

$$\frac{5m}{m} + \frac{n}{2n} + \frac{5x}{8} = \frac{21}{2}$$

$$5 + \frac{1}{2} + \frac{5x}{8} = \frac{21}{2}$$

$$\frac{5x}{8} = \frac{21}{2} - \frac{11}{2}$$

$$\frac{5x}{8} = 5 \Rightarrow 5x = 40$$

$$x = 8 \text{ olur.}$$

Cevap: D

$$13. \cdot \frac{a}{m} \cdot \frac{n}{b} = 3 \Rightarrow \frac{a}{m} = \frac{3b}{n} \text{ ve } \frac{m}{a} = \frac{n}{3b} \text{ olur.}$$

$$\cdot \left( \frac{m}{a} \right)^2 + \frac{n^2}{b^2} = 10 \Rightarrow \left( \frac{n}{3b} \right)^2 + \frac{n^2}{b^2} = 10$$

$$\frac{n^2}{9b^2} + \frac{n^2}{b^2} = 10$$

$$\frac{10n^2}{9b^2} = 10 \Rightarrow n^2 = 9b^2$$

$$\Rightarrow b^2 = \frac{n^2}{9} \Rightarrow b = \frac{n}{3} \text{ olur.}$$

Cevap: D

$$14. \cdot x^4 - 3xy = 44$$

$$x(x^3 - 3y) = 44 \quad (x^3 - 3y = 11)$$

$$11x = 44$$

$$x = 4 \text{ olur.}$$

Cevap: D