

$$1. \quad \frac{a+b}{b} = \frac{5}{2} \Rightarrow 2a+2b=5b$$

$$\Rightarrow 2a=3b$$

$$\Rightarrow \frac{b}{a} = \frac{2}{3} \text{ dür.}$$

CEVAP: B

$$2. \quad \frac{3x-2y}{2x+y} = \frac{3}{5} \Rightarrow 15x-10y=6x+3y$$

$$9x=13y$$

$$\frac{x}{y} = \frac{13}{9} \text{ dur.}$$

CEVAP: B

$$3. \quad a + \frac{1}{b} = 7 \Rightarrow ab + 1 = 7b$$

$$b + \frac{1}{a} = 5 \Rightarrow ab + 1 = 5a$$

$$5a = 7b$$

$$\downarrow \quad \downarrow$$

$$7k \quad 5k \text{ alınırsa,}$$

$$\frac{a+b}{a-b} = \frac{7k+5k}{7k-5k}$$

$$= \frac{12k}{2k}$$

$$= 6$$

CEVAP: B

$$4. \quad \frac{x+y}{x} = 7 \Rightarrow x+y=7x$$

$$y = 6x \text{ bulunur.}$$

Buna göre,

$$\frac{x+y}{y} = \frac{x+6x}{6x}$$

$$= \frac{7x}{6x}$$

$$= \frac{7}{6}$$

CEVAP: D

$$5. \quad \frac{x-y}{x+y} = \frac{2}{3} \Rightarrow 3x-3y=2x+2y$$

$$x = 5y \text{ bulunur.}$$

Buna göre,

$$\frac{2x-3y}{y} = \frac{2 \cdot (5y) - 3y}{y}$$

$$= \frac{10y-3y}{y}$$

$$= \frac{7y}{y}$$

$$= 7 \text{ dir.}$$

CEVAP: D

6.

$$\frac{x+y-3z}{2x-y-z} = 3 \Rightarrow x+y-3z = 6x-3y-3z$$

$$\Rightarrow x+y=6x-3y$$

$$\Rightarrow 4y=5x$$

$$\Rightarrow \frac{x}{y} = \frac{4}{5} \text{ dir.}$$

CEVAP: C



$$7. \frac{a}{b} = \frac{2 \cdot 5}{5 \cdot 5} = \frac{10}{25}$$

$$\frac{c}{a} = \frac{3 \cdot 5}{5 \cdot 5} = \frac{6}{10}$$

$a = 10k, b = 25k, c = 6k$ alınırsa

$$a + b + c = 205$$

$$10k + 25k + 6k = 205$$

$$41k = 205$$

$$k = 5 \text{ bulunur.}$$

Buna göre, $b = 25k$

$$= 25 \cdot 5$$

$$= 125 \text{ dir.}$$

CEVAP: C

$$8. \frac{x}{3} = 3y = \frac{2z}{5} \Rightarrow (x = 9y) \cdot 5$$

$$(15y = 2z) \cdot 3$$

$$\Rightarrow \underset{(18k)}{5x} = \underset{(2k)}{45y} = \underset{(15)}{6z} \text{ bulunur.}$$

$$x + y + z = 18k + 2k + 15k$$

$$= 35k \text{ (} k = 1 \text{)}$$

$$= 35 \text{ dir.}$$

CEVAP: C

$$9. \frac{a}{b} = \frac{c}{d} \Rightarrow \frac{a}{c} = \frac{b}{d} \text{ dir.}$$

$$1 - \frac{1 + \frac{a}{c}}{1 + \frac{b}{d}} = 1 - \frac{1 + \frac{b}{d}}{1 + \frac{b}{d}}$$

$$= 1 - 1$$

$$= 0$$

CEVAP: E

$$10. \frac{x}{y} = \frac{2}{3} \Rightarrow x = 2k \text{ ve } y = 3k$$

$$\frac{2xy}{x^2 + xy} = \frac{2 \cdot (2k) \cdot (3k)}{(2k)^2 + (2k) \cdot (3k)}$$

$$= \frac{12k^2}{10k^2}$$

$$= \frac{12}{10}$$

$$= \frac{6}{5} \text{ dir.}$$

CEVAP: B

$$11. \frac{x}{y} = \frac{3}{4} \Rightarrow x = 3k \text{ ve } y = 4k$$

$$y^3 + x^2 = 0 \Rightarrow (4k)^3 + (3k)^2 = 0$$

$$\Rightarrow 64k^3 = -9k^2$$

$$k = \frac{-9}{64} \text{ bulunur.}$$

Buna göre

$$x = 3k$$

$$x = 3 \cdot \left(\frac{-9}{64} \right)$$

$$x = \frac{-27}{64}$$

CEVAP: A

12.

$$\frac{a}{4} = \frac{b}{3} \Rightarrow \underset{4k}{3a} = \underset{3k}{4b}$$

$$a + b = 63 \Rightarrow 4k + 3k = 63$$

$$7k = 63$$

$$k = 9 \text{ bulunur.}$$

Buna göre,

$$a = 4k$$

$$= 4 \cdot 9$$

$$= 36 \text{ dir.}$$

CEVAP: E

$$13. \quad 3a = 4b \Rightarrow \frac{a}{b} = \frac{4 \cdot 2}{3 \cdot 2} = \frac{8}{6}$$

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

$a = 8k, \quad b = 6k, \quad c = 9k$ alınırsa

$$2a - b + 3c = 74$$

$$2 \cdot (8k) - 6k + 3 \cdot (9k) = 74$$

$$16k - 6k + 27k = 74$$

$$37k = 74$$

$k = 2$ bulunur.

$c = 9k = 9 \cdot 2 = 18$ dir.

CEVAP: C

$$14. \quad \frac{a}{2} = \frac{b}{5} = \frac{c}{4} = k$$

$a = 2k, \quad b = 5k$ ve $c = 4k$

$$3a + 2b - c = 48$$

$$6k + 10k - 4k = 48$$

$$12k = 48 \Rightarrow k = 4$$
 bulunur.

$b = 5k = 5 \cdot 4 = 20$ dir.

CEVAP: D

15.

$$\frac{a}{b} = \frac{1 \cdot 2}{3 \cdot 2} = \frac{2}{6}$$

$$\frac{b}{c} = \frac{2 \cdot 3}{5 \cdot 3} = \frac{6}{15} \text{ ise}$$

$a = 2k, \quad b = 6k, \quad c = 15k$ alınırsa

$$a + b + c = 115$$

$$2k + 6k + 15k = 115$$

$$23k = 115$$

$k = 5$ bulunur.

$$a + c = 2k + 15k$$

$$= 17k$$

$$= 17 \cdot 5$$

$$= 85 \text{ dir.}$$

CEVAP: E

16.

$$\frac{a}{3} = \frac{b}{4} = \frac{c}{5} = k \Rightarrow a = 3k, \quad b = 4k \text{ ve } c = 5k$$

$$\sqrt{3a + 4b} + \sqrt{5c} = \sqrt{3 \cdot (3k) + 4 \cdot (4k)} + \sqrt{5 \cdot (5k)}$$

$$= \sqrt{25k} + \sqrt{25k}$$

$$= 5\sqrt{k} + 5\sqrt{k}$$

$$= 10\sqrt{k}$$

CEVAP: A



$$17. \frac{4x + \frac{x}{y}}{6x + \frac{2x}{y}} = \frac{3}{5} \Rightarrow \frac{4xy + x}{6xy + 2x} = \frac{3}{5}$$

$$\frac{4xy + x}{6xy + 2x} = \frac{3}{5} \left(x \cdot y = \frac{1}{2} \right)$$

$$\frac{2+x}{3+2x} \cdot \frac{3}{5} \Rightarrow 10 + 5x = 9 + 6x$$

$x = 1$ bulunur.

$$x \cdot y = \frac{1}{2} \Rightarrow 1 \cdot y = \frac{1}{2} \Rightarrow y = \frac{1}{2}$$

Buna göre,

$$x + y = 1 + \frac{1}{2} = \frac{3}{2} \text{ dir.}$$

CEVAP: C

$$18. \frac{a}{8} = \frac{b}{3} = k \Rightarrow a = 8k \text{ ve } b = 3k$$

$$\sqrt{2a} + \sqrt{3b} = 28$$

$$\sqrt{2(8k)} + \sqrt{3 \cdot (3k)} = 28$$

$$4\sqrt{k} + 3\sqrt{k} = 28$$

$$7\sqrt{k} = 28$$

$$\sqrt{k} = 4 \Rightarrow k = 16$$

CEVAP: C

$$19. \frac{x+y}{2} = \frac{x+z}{3} = \frac{z+y}{4} = k \text{ ise}$$

$$\begin{array}{r} x + y = 2k \\ -1(x + z = 3k) \Rightarrow -x - z = -3k \\ y + z = 4k \\ \hline 2y = 3k \Rightarrow y = \frac{3k}{2} \end{array}$$

$$x + \frac{3k}{2} = 2k \Rightarrow x = \frac{k}{2}$$

$$\frac{k}{2} + z = 3k \Rightarrow z = \frac{5k}{2} \text{ bulunur.}$$

Buna göre;

$$\begin{aligned} \frac{y+z}{x} &= \frac{\frac{3k}{2} + \frac{5k}{2}}{\frac{k}{2}} \\ &= \frac{4k}{\frac{k}{2}} \\ &= 8 \text{ dir.} \end{aligned}$$

CEVAP: C

$$20. \frac{3x}{2} = y \text{ ve } \frac{y}{4} = \frac{z}{3}$$

$$3x = 2y, \quad 3y = 4z$$

$$3 \cdot (3x = 2y), \quad 2(3y = 4z)$$

$$9x = 6y, \quad 6y = 8z \text{ ise}$$

$$9x = 6y = 8z \text{ dir.}$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ 8k & 12k & 9k \end{array}$$

$$\text{Buna göre, } x + y + z = 8k + 12k + 9k = 29k$$

$$k = -1 \text{ alınırsa}$$

$$x + y + z \text{ en çok } -29 \text{ bulunur.}$$

CEVAP: A