

$$1. \cdot \frac{2a-5b}{b} = 7$$

$$2a - 5b = 7b$$

$$2a = 12b \Rightarrow a = 6b$$

$$\Rightarrow \frac{a+b}{a} = \frac{6b+b}{6b} = \frac{7b}{6b} = \frac{7}{6} \text{ olur.}$$

Cevap: B

$$2. \frac{a-b}{b} \cdot \frac{d}{c+d} = \frac{2-5}{8} \cdot \frac{5}{2+5} = \frac{-3}{7}$$

Cevap: C

$$3. \frac{x-y}{5} \times \frac{x+y}{3} \text{ (içler-dışlar çarpımı yapılırsa)}$$

$$3x - 3y = 5x + 5y$$

$$-3y - 5y = 5x - 3x$$

$$-8y = 2x \Rightarrow x = -4y$$

$$\text{Buna göre } \frac{x^2 - y^2}{x \cdot y} = \frac{(-4y)^2 - y^2}{-4y \cdot y} = \frac{16y^2 - y^2}{-4y^2}$$

$$= \frac{15y^2}{-4y^2} = \frac{-15}{4}$$

Cevap: C

$$4. \cdot \frac{x}{y} = \frac{2}{3} \Rightarrow x = 2k \quad \text{ve} \quad y = 3k$$

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

$$8k + 4z = 9k + 3z$$

$$z = k$$

$$\Rightarrow \frac{x}{z} = \frac{2k}{k} = 2 \text{ olur.}$$

Cevap: E

$$5. \cdot \frac{3a+b+c}{10} \times \frac{b+c}{7}$$

$$21a + 7(b+c) = 10(b+c)$$

$$21a = 3(b+c)$$

$$7a = b+c$$

$$\Rightarrow \frac{b+c}{a} = \frac{7a}{a} = 7 \text{ olur.}$$

Cevap: D

$$6. \cdot \frac{x}{y} = 3 \Rightarrow x = 3y$$

$$\cdot \frac{x+y}{z+y} = \frac{7}{3} \quad (x = 3y)$$

$$\frac{3y+y}{z+y} = \frac{7}{3}$$

$$\frac{4y}{z+y} = \frac{7}{3} \Rightarrow 12y = 7z + 7y$$

$$5y = 7z$$

$$y = 7k \quad \text{ve} \quad z = 5k$$

$$\cdot x = 3y = 3 \cdot 7k = 21k$$

$$\Rightarrow \frac{x}{z} = \frac{21k}{5k} = \frac{21}{5}$$

Cevap: B

$$7. \cdot \frac{x+y-z}{3} = \frac{x-y-z}{5} = 4$$

$$\frac{x+y-z+x-y-z}{8} = 4$$

$$\frac{2(x-z)}{8} = 4 \Rightarrow 2(x-z) = 32$$

$$x-z = 16$$

$$\cdot \frac{x-y-z}{5} = 4$$

$$x-z-y = 20$$

$$16-y = 20$$

$$\Rightarrow y = -4$$

Cevap: E

$$8. \cdot \frac{a}{2} = \frac{b}{3} = \frac{c}{7} = k$$

$$a = 2k, \quad b = 3k, \quad c = 7k$$

$$\cdot a + b + c = 48$$

$$2k + 3k + 7k = 48 \Rightarrow 12k = 48$$

$$k = 4$$

$$\Rightarrow a.b + c = 2k.3k + 7k$$

$$= 6k^2 + 7k$$

$$= 6.4^2 + 7.4$$

$$= 96 + 28$$

$$= 124 \text{ olur.}$$

Cevap: E

$$9. \cdot \frac{a}{b} = \frac{3.3}{2.3}$$

$$\frac{b}{c} = \frac{3.2}{4.2} \Rightarrow a = 9k$$

$$b = 6k$$

$$c = 8k$$

$$\cdot a + b - c = 21$$

$$9k + 6k - 8k = 21$$

$$7k = 21 \Rightarrow k = 3$$

$$\cdot a - b + c = 9k - 6k + 8k = 11.k = 33 \text{ olur.}$$

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Cevap: B

$$10. \cdot \frac{a}{3.5} = \frac{b}{4.5} \Rightarrow a = 15k$$

$$\frac{b}{4.5} = \frac{c}{6.4} \Rightarrow b = 20k$$

$$c = 24k$$

$$\cdot a + b + c = 15k + 20k + 24k = 59$$

$$59k = 59$$

$$k = 1$$

$$\Rightarrow a.b = 15k.20k = 15.20 = 300$$

Cevap: D

$$11. \cdot a:b:c = 2:3:5$$

$$\Rightarrow a = 2k, \quad b = 3k \text{ ve } c = 5k$$

$$\cdot a.b.c = 240$$

$$2k.3k.5k = 240$$

$$30k^3 = 240$$

$$k^3 = 8 \Rightarrow k = 2$$

$$\Rightarrow \frac{a.b}{c} = \frac{4.6}{10} = \frac{24}{10} = \frac{12}{5}$$

Cevap: A

$$12. \cdot 3x = 2y = \frac{z}{4} = 6k \Rightarrow x = 2k, \quad y = 3k \text{ ve } z = 24k \text{ olur.}$$

$$\cdot \frac{y.z}{x} = 6 \Rightarrow \frac{3k.24k}{2k} = 6$$

$$72k = 12 \Rightarrow k = \frac{1}{6}$$

$$\Rightarrow x + y + z = 2k + 3k + 24k = 29k = \frac{29}{6} \text{ olur.}$$

Cevap: C

$$13. \cdot 3ab = 4bc = 5ac \text{ eşitliğin her tarafını } a.b.c'ye \text{ bölelim}$$

$$\frac{3\cancel{a}\cancel{b}}{\cancel{a}\cancel{b}c} = \frac{4\cancel{b}\cancel{c}}{a\cancel{b}\cancel{c}} = \frac{5\cancel{a}\cancel{c}}{\cancel{a}b\cancel{c}}$$

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

$$\cdot \frac{a-3b+2c}{a+3b-2c} = \frac{4k-3.5k+2.3k}{4k+3.5k-2.3k} = \frac{4k-15k+6k}{4k+15k-6k}$$

$$= \frac{-5k}{13k} = \frac{-5}{13}$$

Cevap: D