



Exercise 8C

Q1

Answer :

The correct option is (d).

$$\begin{aligned}\frac{a}{c} &= \frac{a}{b} \times \frac{b}{c} = \frac{3}{4} \times \frac{8}{9} \\ &= \frac{2}{3}\end{aligned}$$

Hence, $a : c = 2 : 3$

Q2

Answer :

(a) $15 : 8$

$$\frac{A}{B} = \frac{2}{3}$$

$$\frac{B}{C} = \frac{4}{5}$$

$$\text{Then, } \frac{A}{B} \times \frac{B}{C} = \frac{2}{3} \times \frac{4}{5} = \frac{8}{15}$$

Hence, $C : A = 15 : 8$

Q3

Answer :

The correct option is (d).

$$A = \frac{3B}{2}$$

$$C = \frac{4B}{5}$$

$$\therefore A : C = \frac{A}{C} = \frac{\frac{3B}{2}}{\frac{4B}{5}} = \frac{15}{8}$$

Hence, $A : C = 15 : 8$

Q4

Answer :

The correct option is (b).

$$\frac{15}{100} A = \frac{20}{100} B$$

$$\Rightarrow \frac{A}{B} = \frac{4}{3}$$

Hence, $A : B = 4 : 3$

Q5

Answer :

(a) $1 : 3 : 6$

$$A = \frac{1}{3} B$$

$$C = 2B$$

$$\therefore A : B : C = \frac{1}{3} B : B : 2B = 1 : 3 : 6$$

Q6

Answer :

(b) $30 : 42 : 77$

$$\frac{A}{B} = \frac{5}{7}$$

$$\Rightarrow A = \frac{5B}{7} \quad \frac{B}{C} = \frac{6}{11} \Rightarrow C = \frac{11B}{6}$$

$$\therefore A : B : C = \frac{5B}{7} : B : \frac{11B}{6} = 30 : 42 : 77$$

Q7

Answer :

(c) 6 : 4 : 3

$$2A = 3B = 4C$$

$$\text{Then, } A = \frac{3B}{2} \text{ and } C = \frac{3B}{4}$$

$$\therefore A : B : C = \frac{3B}{2} : B : \frac{3B}{4} = 6 : 4 : 3$$

Q8

Answer :

(a) 3 : 4 : 5

$$A = \frac{3B}{4}$$

$$C = \frac{5B}{4}$$

$$\therefore A : B : C = \frac{3B}{4} : B : \frac{5B}{4}$$

$$= 3 : 4 : 5$$

Q9

Answer :

(b) 15 : 10 : 6

$$\frac{1}{x} : \frac{1}{y} = 2 : 3$$

Then, $y : x = 2 : 3$ and $y = \frac{2}{3}x$

$$\frac{1}{y} : \frac{1}{z} = 3 : 5$$

Then, $z : y = 3 : 5$ and $z = \frac{3}{5}y$

$$\begin{aligned}\therefore x : y : z &= x : \frac{2}{3}x : \frac{3}{5}y = x : \frac{2}{3}x : \frac{3}{5} \times \frac{2}{3}x \\ &= x : \frac{2}{3}x : \frac{2}{5}x = 15 : 10 : 6\end{aligned}$$

Q10

Answer :

$$\frac{x}{y} = \frac{3}{4}$$

$$x = \frac{3y}{4}$$

$$\begin{aligned}\therefore \frac{7x + 3y}{7x - 3y} &= \frac{7\frac{3y}{4} + 3y}{7\frac{3y}{4} - 3y} \\ &= \frac{21y + 12y}{21y - 12y} = \frac{33y}{9y} = \frac{11}{3}\end{aligned}$$

Hence, $(7x + 3y) : (7x - 3y) = 11 : 3$

The correct option is (c).

Q11

Answer :

(c) $5 : 2$

***** END *****