Exercise 8C

Q1

Answer :

The correct option is (d).

$$\frac{a}{c} = \frac{a}{b} \times \frac{b}{c} = \frac{3}{4} \times \frac{8}{9}$$
$$= \frac{2}{3}$$

Hence, $a : c = 2 : 3$

Q2

Answer :

(a) 15 : 8

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

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

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

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

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

Q7

Answer :

(c) 6 : 4 : 3

$2A = 3B = 4C$

Then, $A = \frac{3B}{2}$ 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 $z = \frac{3}{5}y$

$\therefore x : y : z = x : \frac{2}{3}x : \frac{3}{5}y = x : \frac{2}{3}x : \frac{3}{5} \times \frac{2}{3}x$

$= x : \frac{2}{3}x : \frac{2}{5}x = 15 : 10 : 6$

Q10

Answer :

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

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

$\therefore \frac{7x + 3y}{7x - 3y} = \frac{7\frac{3y}{4} + 3y}{7\frac{3y}{4} - 3y}$

$= \frac{21y + 12y}{21y - 12y} = \frac{33y}{9y} = \frac{11}{3}$

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

The correct option is (c).

Q11

Answer :

(c) 5 : 2

********** END **********