

Chapter 6 Ratio and Proportion Ex 6.3

Question 1.

6 bowls cost ₹ 90. What would be the cost of 10 such bowls?

Solution:

Cost of 6 bowls = ₹ 90

Let cost of 10 bowls = ₹ x

$$6 : 10 = 90 : x$$

$$\Rightarrow 6 \times x = 10 \times 90 \text{ (ad = bc)}$$

$$x = ₹ 150$$

Cost of 10 bowls = ₹ 150

Question 2.

Ten pencils cost ₹ 15. How many pencils can be bought with ₹ 72?

Solution:

Cost of 10 pencils = ₹ 15

Let number of pencils will be bought in ₹ 72 = x

$$10 : x = 15 : 72$$

$$x \times 15 = 10 \times 72 \text{ (bc = ad)}$$

$$x = 48$$

Number of pencils = 48

Question 3.

400 grams cake costs 80 rupees. How much would a 1.5 kg cake cost?

Solution:

Cost of 400 g cake = ₹ 80

Let cost of 1.5 kg cake = ₹ x

$$1.5 \text{ kg} = 1500 \text{ gm}$$

$$400 : 1500 = 80 : x$$

$$400 \times x = 1500 \times 80 \text{ (ad = bc)}$$

$$x = ₹ 300$$

Cost of 1.5 kg = ₹ 300

Question 4.

A man earns ₹ 18000 in 3 months.

(i) How much time would he take to earn ₹ 30000?

(ii) How much money will he earn in 7 months?

Solution:

A man earns in 3 months = ₹ 18000

Let ₹ 30000 be earned in = x months

$$18000 : 30000 = 3 : x \text{ (ad = bc)}$$

$$18000 \times x = 30000 \times 3$$

$$x = 5$$

₹ 30000 will be earned in 5 months

(ii) Let money will be earned in 7 months = ₹ x

$$3 : 7 = 18000 : x \text{ (ad = bc)}$$

$$3 \times x = 7 \times 18000$$

$$x = 42000$$

A money of ₹ 42000 will be earned.

Question 5.

12 mangoes weigh 2.4 kg. What is the weight of 8 mangoes?

Solution:

Weight of 12 mangoes = 2.4 kg

Let weight of 8 mangoes = x kg

$$12 : 8 = 2.4 : x$$

$$12 \times x = 8 \times 2.4$$

$$x = 1.6$$

Weight of 8 mangoes = 1.6 kg

Question 6.

If the weight of 12 sheets of thick paper is 40 grams, how many sheets of the same paper would weigh 212 kilograms?

Solution:

Weight of 12 sheets of paper = 40 grams

Let $2\frac{1}{2}$ kg = $\frac{5}{2} \times 1000 = 2500$ gram,

sheets of thick paper = x sheets

$$12 : x = 40 : 2500$$

$$12 \times 2500 = x \times 40 \text{ (ad = bc)}$$

$$x = 750$$

Sheets are 750

Question 7.

A bus consumes 25 litres of diesel in covering a distance of 90 kilometres. How much diesel is needed to cover 288 kilometres?

Solution:

A bus consum 25l of diesel to cover = 90km

Let it will consum x litres of diesel for 288 km

$$90 : 288 = 25 : x$$

$$90 \times x = 288 \times 25$$

$$x = 80$$

Required diesel = 80 litre

Question 8.

If 45 metre cloth costs ₹ 36, find the cost of 215 metres of cloth.

Solution:

$$\text{Cost of } \frac{4}{5} \text{ m} = ₹36$$

$$\text{Let cost of } 2\frac{1}{5} = \frac{11}{5} \text{ m of cloth} = ₹x$$

$$\therefore \frac{4}{5} : \frac{11}{5} = 36 : x$$

$$\Rightarrow \frac{4}{5} \times x = \frac{11}{5} \times 36 \quad (ad = bc)$$

$$\Rightarrow x = \frac{11}{5} \times 36 \times \frac{5}{4} = 99$$

$$\therefore \text{Cost of } \frac{11}{5} \text{ litre of diesel} = ₹99$$

Question 9.

If 15 men can pack 540 parcels per day, how many men are needed to pack 396 parcels per day?

Solution:

15 men can pack = 540 parcels per day

Let 396 parcels be packed by x men

$$540 : 396 = 15 : x$$

$$540 \times x = 396 \times 15 \quad (ad = bc)$$

$$x = 11$$

Required men = 11

Question 10.

Which is a better buy 12 kg potatoes for ₹ 132 or 16 kg potatoes for ₹ 168?

Solution:

12 kg potatoes for ₹ 132

Cost of 1 kg = $\frac{132}{12}$ = ₹ 11

and cost of 16 kg = ₹ 168

Cost of 1 kg = $\frac{168}{16}$ = ₹ 10.50

Second deal is better.

i.e., 16 kg of potatoes for ₹ 168 is better.