

Board -CBSE

Class - 6th

Topic - Ratios and Proportions Ex:12.3

Exercise 12.3

1. If the cost of 7 m of cloth is 294, find the cost of 5 m of cloth.

Ans. Using unitary method, we have the cost of 7 m of cloth = ₹ 294

$$\text{Cost of 1 m of cloth} = 294/7$$

$$\text{Cost of 5 m of cloth} = (294/7) \times 5 = 42 \times 5$$

$$= ₹ 210$$

Thus, the required cost = ₹ 210

2. Ekta earns ₹1500 in 10 days. How much will she earn in 30 days?

Ans. In 10 days Ekta earns ₹ 1500

$$\text{In 1 day Ekta will earn} = ₹ (1500/10)$$

$$\text{In 30 days Ekta will earn} = ₹ (1500/10) \times 30 = ₹ (150 \times 30)$$

Thus the money earned by Ekta in 30 days = ₹ 4500.

3. If it has rained 276 mm in the last 3 days, how many centimeters of rain will fall in one full week

(7 days)? Assume that the rain continues to fall at the same rate.

Ans. The measure of rain in 3 days = 276 mm.

$$\text{The measure of rain in 1 day} = \frac{276}{3} \text{ mm.}$$

$$\text{The measure of rain in 7 days} = \frac{276}{3} \times 7 \text{ mm.}$$

$$= 92 \times 7 \text{ mm} = 644 \text{ mm or } 64.4 \text{ cm } [\because 1 \text{ cm} = 10 \text{ mm}]$$

Thus, the amount of rain that falls in a week = 64.4 cm.

4. Cost of 5 kg of wheat is ₹ 30.50.

(a) What will be the cost of 8 kg of wheat?

(b) What quantity of wheat can be purchased for ₹ 61?

Ans. (a) Cost of 5 kg of wheat = ₹ 30.50

$$\text{Cost of 1 kg of wheat} = ₹ (30.50/5)$$

$$\text{Cost of 8 kg of wheat} = ₹ (30.50/5) \times 8$$

$$= ₹ 48.80$$

Thus, the required cost = ₹ 48.80

(b) The quantity of wheat purchased in ₹ 30.50 = 5 kg

The quantity of wheat purchased in ₹ 1 = $\frac{5}{30.50}$ kg

The quantity of wheat purchased in ₹ 61 = $\frac{5 \times 61}{30.50}$ kg

Thus, the required quantity of wheat that can be purchased for ₹ 61 = 10 kg

5. The temperature dropped 15 degrees Celsius in the last 30 days.

If the rate of temperature drop remains the same,

how many degrees will the temperature drop in the next ten days?

Ans. The drop in temperature in 3 days = 15 degrees Celsius

The drop in temperature in 1 day = $\frac{15}{30}$ degrees Celsius

The drop in temperature in 10 days = $\frac{15}{30} \times 10$ degrees Celsius = 5 degrees Celsius

Thus the drop in temperature in the last 10 days = 5 degrees Celsius.

6. Shaina pays ₹ 7500 as rent for 3 months. How much does she have to pay for a whole year, if the rent per month remains the same?

Ans. Amount of rent for 3 months = ₹ 7500

Amount of rent for 1 month = ₹ (7500/3)

Amount of rent for 12 months = ₹ (7500/3) × 12

= ₹ 30,000

Thus the required amount of rent to be paid in 1 year = ₹ 30,000.

7. Cost of 4 dozen bananas is ₹ 60. How many bananas can be purchased for ₹12.50?

Ans. ∴ 1 dozen = 12 units

∴ 4 dozen of bananas = 12 × 4 = 48 bananas

₹ 60 is the cost of 4 dozen = 4 × 12 = 48 bananas

No. of bananas for ₹ 1 = (48/60) bananas

No. of bananas for ₹ 12.50 = (48/60) × 12.50 bananas

= 10 bananas

Thus, 10 bananas can be brought for ₹ 12.50

8. The weight of 72 books is 9 kg. What is the weight of 40 such books?

Ans. Weight of 72 books = 9 kg

$$\text{Weight of 1 book} = \frac{9}{72} \text{ kg}$$

$$\text{Weight of 40 books} = \frac{9}{72} \times 40 \text{ kg} = 5 \text{ kg}$$

Hence, 40 books weigh 5 kg.

9. A truck requires 108 liters of diesel for covering a distance of 594 km.

How much diesel will be required by the truck to cover a distance of 1650 km?

Ans. To cover 594 km, diesel required = 108 liters.

$$\text{To cover 1 km, diesel required will be} = \frac{108}{594} \text{ liters}$$

$$\text{To cover 1650 km, diesel required} = \frac{108 \times 1650}{594} \text{ litres} = 300 \text{ liters}$$

Thus, 300 liters of diesel is required by the truck to cover a distance of 594 km.

10. Raju purchases 10 pens for ₹150 and Manish buys 7 pens for ₹ 84.

Can you say who got the pens cheaper?

Ans. For Raju,

$$\text{Cost of 10 pen} = ₹150$$

$$\text{Cost of 1 pen} = ₹ (150/10) = ₹ 15$$

For Manish,

$$\text{Cost of 7 pens} = ₹ 84$$

$$\text{Cost of 1 pen} = ₹ (84/7) = ₹ 12$$

$$\therefore ₹12 < ₹15$$

Thus Manish got the pens cheaper than Raju.

11. Anish made 42 runs in 6 overs and Anup made 63 runs in 7 overs. Who made more runs per over?

Ans. Runs made by Anish in 6 overs = 42

Runs made by him in 1 over = $\frac{42}{6} = 7$ runs.

Runs made by Anup in 7 overs = 63

Runs made by him in 1 over = $\frac{63}{7} = 9$ runs.

$\therefore 9 \text{ runs} > 7 \text{ runs.}$

Thus, Anup has made more runs.