

EXERCISE 10.1

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1. 20 chocolates cost Rs 320. Find the cost of 35 such chocolates.

Solution:

Given cost of 20 chocolates = Rs 320

Cost of 1 chocolate = $(320/20)$

Therefore, the cost of 35 chocolates = $(320/20) \times 35$
= Rs 560

2. The cost of 40 meters of cloth is Rs 200. Find the cost of 50 meters of cloth.

Solution:

Given cost of 40 meters of cloth = Rs 200

Cost of 1 meter of cloth = $(200/40)$

Therefore, the cost of 50 chocolates = $(200/40) \times 50$
= Rs 250

3. A car can cover a distance of 522 km on 36 liters of petrol. How far can it travel on 14 liters of petrol?

Solution:

Given that number of kilometres a car can cover by using 36 litres of petrol = 522 km

Number of kilometres a car can cover by using 1 litre of petrol = $522/36$

Hence, the number of kilometres a car can cover by using 14 litres = $(522/36) \times 14$
= 203 km

4. Travelling 900 km by rail costs Rs 280. What would be the fare for a journey of 360 km when a person travels by the same class?

Solution:

Given that cost of travelling 900 km by rail = Rs 280

Therefore cost of travelling 1 km by rail = $(280/900)$

Hence, Cost of travelling 360 km by rail = $(280/900) \times 360$
= Rs 112

5. If 6 oil tankers can be filled by a pipe in $4\frac{1}{2}$ hours, how long does the pipe take to fill 4 such oil tankers?

Solution:

Given that time taken by 6 oil tankers to be filled by a pipe = $4\frac{1}{2}$ hours = $\frac{9}{2}$ hours

Time taken by 1 oil tankers to be filled by a pipe = $\frac{9}{2}/6$ hours

Hence time taken by 4 oil tankers to be filled by a pipe = $\frac{9}{2}/6 \times 4$

$$= \frac{9}{12} \times 4$$

$$= 3 \text{ hours}$$

6. $\frac{3}{4}$ of the salary per month is Rs 600. What is the salary per month?

Solution:

Given that $\frac{3}{4}$ of the salary per month = 600

Let the salary of the month be x

$$\text{Therefore } \frac{3}{4} \times x = 600$$

$$x = 600 \times \frac{4}{3}$$

$$x = 800$$

Therefore salary per month is Rs 800

7. The cost of 32 tables is Rs 23520. Find the number of such tables that can be purchased for Rs 51450.

Solution:

Given that number of tables bought for Rs 23520 = 32

Number of tables bought for Rs 1 = $32/23520$

$$\text{Hence, number of tables bought for Rs 51450} = \left(\frac{32}{23520}\right) \times 51450 = 70$$

8. The yield of wheat from 6 hectares is 280 quintals. Find the number of hectares required for a yield of 225 quintals.

Solution:

Given number of hectares required for a yield of 280 quintals = 6 hectares

Number of hectares required for a yield of 1 quintal = $6/280$ hectares

Hence, the number of hectares required for a yield of 225 quintals = $6/280 \times 225$

$$= 4\frac{23}{28} \text{ hectares}$$

9. Fifteen post cards cost Rs 2.25. What will be the cost of 36 post cards? How many postcards can we buy in Rs 45?

Solution:

Given cost of 15 post cards = Rs 2.25

Cost of 1 post card is = $2.25/15$

Hence, the cost of 36 post cards = $(2.25/15) \times 36$
= Rs 5.40

Number of post cards bought for Rs 2.25 = 15

Numbers of post cards bought for Rs 1 = $15/2.25$

Hence number of post cards for Rs 45 = $(15/2.25) \times 45$
= 300

10. A rail journey of 75 km costs Rs 215. How much will a journey of 120 km cost?

Solution:

Given cost of a rail journey of 75 km = Rs 215

Cost of a rail journey of 1 km = $215/75$

Hence, cost of a rail journey of 120 km = $(215/75) \times 120$
= Rs 344

11. If the sales tax on a purchase worth Rs 60 is Rs 4.20. What will be the sales tax on the purchase worth of Rs 150?

Solution:

Given sales tax on the purchase worth of Rs 60 = Rs 4.20

Sales tax on the purchase worth of Rs 1 = Rs 4.20/60

Hence, sales tax on the purchase worth of Rs 150 = $(4.20/60) \times 150$
= Rs 10.50

12. 52 packets of 12 pencils each, cost Rs 499.20. Find the cost of 65 packets of 10 pencils each.

Solution:

Given total number of pencils in 52 packets of 12 pencils each = 52×12
= 624 pencils

Also given that cost of 624 pencils = Rs 499.20

Cost of 1 pencil = $(499.20/624)$

Number of pencils in 65 packets of 10 pencils each = 65×10
= 650 pencils

Therefore, cost of 650 pencils = $(499.20/624) \times 650$
= Rs 520.

