Exercise 10.1

Q1. 20 chocolates cost Rs 320. Find the cost of 35 such chocolates.

Solution:

Cost of 20 chocolates = Rs 320

Cost of 1 chocolate = Rs $(\frac{320}{20})$

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

Q2. The cost of 40 meters of cloth is Rs 200. Find the cost of 50 meters of cloth.

Solution:

Cost of 40 meters of cloth = Rs 200

Cost of 1 meter of cloth = Rs $(\frac{200}{40})$

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

Q3. A car can cover a distance of 522 km on 36 liters of petrol. How far can it travel on 14 litres of petrol?

Solution:

Number of kilometers a car can cover by using 36 liters = 522 km

Number of kilometers a car can cover by using 1 liter = $\frac{522}{36}$ km

Hence, the number of kilometers a car can cover by using 14 liters = $(\frac{522}{36} \times)$ km = 203 km

Q4. 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:

Cost of travelling 900 km by rail = Rs 280

Cost of travelling 1 km by rail = Rs $(\frac{280}{900})$

Hence, Cost of travelling 360 km by rail = Rs $\frac{280}{900} \times 360$ = Rs 112

Q5. 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:

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 = $\frac{\frac{9}{2}}{6}$ hours

Hence, the time taken by 4 oil tankers to be filled by a pipe = $\frac{9}{12} \times 4$ hours = 3 hours

Q6. $\frac{3}{4}$ of the salary per month is Rs 600. What is the salary per month?

Solution:

Let the salary be 'x'

Given,

$\frac{3}{4}$ of the salary per month is Rs 600

- $\frac{3}{4} \times x$ = Rs 600
- x = Rs $600 \times \frac{4}{3}$
- x = Rs 800

Therefore, the salary per month is Rs 800

Q7. The cost of 32 tables is Rs 23520. Find the number of such tables that can be purchased for Rs 51450

Solution:

Number of tables bought for Rs 23520 = 32

Number of tables bought for Re 1 = $\frac{32}{23520}$

Number of tables bought for Rs 51450 = $\frac{32}{23520} \times 51450$ = 70

Q8. The yield of wheat from 6 hectares is 280 quintals. Find the number of hectares required for a yield of 225 quintals.

Solution:

Number of hectares required for a yield of 280 quintals = 6 hectares

Number of hectares required for a yield of 1 quintal = $\frac{6}{280}$ hectares

Hence, the number of hectares required for a yield of 225 quintals = $\frac{6}{280} \times 225$ hectares = $4\frac{23}{28}$ hectares

Q9. 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:

Cost of 15 post cards = Rs 2.25

Cost of 1 post card = Rs $\frac{2.25}{15}$

Cost of 36 post cards = Rs $\frac{2.25}{15} \times 36$ = Rs 5.4

As we know,

Number of postcards bought at Rs 2.25 = 15

Number of postcards bought at Re 1 = $\frac{15}{2.25}$

Number of postcards bought at Rs 45 = $\frac{15}{2.25} \times 45$ = 300

Q10. A rail journey of 75 km costs Rs 215. How much will a journey of 120 km cost?

Solution:

Cost of a rail journey of 75 km = Rs 215

Cost of a rail journey of 1 km = Rs $\frac{215}{75}$

Cost of a rail journey of 120 km = Rs $\frac{215}{75} \times 120$ = Rs 344

Q11. 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:

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

Sales tax on the purchase worth of Re 1 = Rs $\frac{4.20}{60}$

Sales tax on the purchase worth of Rs 150 = Rs $\frac{4.20}{60} \times 150$ = Rs 10.50

Q12. 52 packets of 12 pencils each, cost Rs 499.20. Find the cost of 65 packets of 10 pencils each.

Solution:

Total number of pencils in 52 packets of 12 pencils each = 52 x 12 = 624

Cost of 624 pencils = Rs 499.20

Cost of 1 pencil = Rs $\frac{499.20}{624}$

Now,

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

Therefore, cost of 650 pencils = Rs $\frac{499.20}{624} \times 650$ = Rs 520.