

Chapter 10 Unitary Method

Exercise - 10.1

Unitary Method.

VII

Solution 1:-

Given that,

cost of 20 chocolates = Rs 320.

$$\begin{aligned}\therefore \text{Cost of one chocolate} &= \frac{320}{20} \\ &= \text{Rs. } 16.\end{aligned}$$

$$\begin{aligned}\text{Hence, cost of 35 chocolates} &= \text{Rs} \left(\frac{320}{20} \times 35 \right) \\ &= \frac{320}{4} \times 7 \\ &= 80 \times 7 \\ &= \text{Rs } 560.\end{aligned}$$

Solution-2:-

We have,

cost of 40 meters of cloth = Rs 200 (200)

$$\begin{aligned}\text{cost of one meter cloth} &= \frac{200}{40} \\ &= \text{Rs } 5.\end{aligned}$$

$$\begin{aligned}\therefore \text{Hence, cost of 50 meters of cloth} &= \frac{200}{40} \times 50 \\ &= \text{Rs. } 250.\end{aligned}$$

Solution-03 :-

It is given that,

With 36 Litres of petrol the car goes 522km.

∴ With 1 Litre of petrol the car goes $\frac{522}{36}$ km

Hence, with 14 Litres of petrol it would go

$$\left(\frac{522}{36} \times 14 \right) \text{ km} = \frac{522}{18} \times 7 = 29 \times 7 \text{ km} \\ = 203 \text{ km.}$$

Solution-04 :-

It is given that,

Travelling 900km by rail costs Rs. 280

$$\begin{aligned} \therefore \text{Fare for the Journey of 360km} &= \frac{280}{900} \times 360 \\ &= \frac{280 \times 4}{10} \\ &= \frac{1120}{10} \\ &= \text{RS. } 112. \end{aligned}$$

Solution-05 :-

It is given that.

6 oil tankers can be filled by a pipe in $4\frac{1}{2}$ hours,

$$\begin{aligned} \therefore 4 \text{ oil tankers can be filled by a pipe} &= \frac{9}{2} \times 4 \\ &= \frac{36}{12} = 3 \text{ hours} \end{aligned}$$

Solution -06:-

$\frac{3}{4}$ of salary per month is RS 600 =

0.75 of salary per month is 600

$\frac{3}{4}$ of salary per month = 600.

Salary per day = $\frac{600}{30} = 20$.

Salary per month = $\frac{600 \times 4}{3}$ [$\frac{3}{4}$ Salary = 600]

= RS. 800.

Solution -07:-

The cost of 32 tables = RS 23520.

cost of one table = $\frac{23520}{32}$

= $\frac{1470}{2}$

= RS. 735

Number of such tables for RS 51450 = $\frac{51450}{735}$

= 70

$\therefore$ 70 such tables can be purchased by RS. 51450.

Solution-08:-

The yield of wheat from 6 hectares = 280 quintals.

$$\begin{aligned}\text{Yield of wheat from one hectare} &= \frac{280}{6} \\ &= \frac{140}{3}.\end{aligned}$$

The yield of wheat from x hectares = $\frac{225 \text{ quintals}}{\frac{140}{3}}$

$$= \frac{3 \times 225}{140}$$

$$= 4.8214.$$

Solution-09:-

Fifteen postcards cost = RS 2.25.

$$\text{cost of postcard cost} = \text{RS } \frac{2.25}{15}$$

$$= 0.15$$

$$= \text{RS } 0.15$$

$$\text{cost of 36 post cards} = 36 \times 0.15$$

$$= \text{RS } 5.40.$$

x cost = RS.45 for x cards.

$$x = \frac{45}{0.15}$$

$$= 300 \text{ Post cards.}$$

Solution-10:

Rail journey of 75km costs RS 215.

$$\text{One km cost} = \frac{215}{75}$$

$$120 \text{ km cost} = \frac{215}{75} \times 120$$

$$\begin{aligned} \text{cost per 120km} &= \frac{215 \times 8}{5} \\ &= \text{RS. } 344. \end{aligned}$$

Solution-11:-

It is given that,

Sales tax on a purchase worth RS 60 is RS 4.20.

$$\text{Sales tax on a purchase worth RS 1} = \frac{4.20}{60}$$

$$= 0.07,$$

$$\begin{aligned} \text{sales tax on a purchase worth RS 150} &= 0.07 \times 150 \\ &= \text{RS } 10.50. \end{aligned}$$

Solution-12:

It is given that,

52 packets of 12 Pencils each cost = RS 499.20,

$$\text{Packet cost} = \frac{499.20}{52} = 9.6$$

$$\text{Pencil cost} = \frac{9.6}{12} = 0.8.$$

$$\begin{aligned} 65 \text{ Packets of 10 pencils each} &= 65 \times 10 \text{ pencils} = 650 \text{ P} \\ \text{cost of 65 packets} &= \frac{650 \times 0.8}{1} = \text{RS. } 520. \end{aligned}$$