

EXERCISE 14(E)

Question 1.

From a rope of $10\frac{1}{2}$ m long, $4\frac{5}{8}$ m is cut off. Find the length of the remaining rope.

Solution:

$$\text{Length of rope} = 10\frac{1}{2}m$$

$$\text{Length of cut off rope} = 4\frac{5}{8}m$$

$$\begin{aligned}\text{Remaining rope} &= \left(10\frac{1}{2}m - 4\frac{5}{8}m\right) \\ &= \frac{21}{2}m - \frac{37}{8}m \\ &= \frac{84 - 37}{8} = \frac{47}{8} = 5\frac{7}{8}m.\end{aligned}$$

Question 2.

A piece of cloth is 5 metre long. After washing, it shrinks by $\frac{1}{25}$ of its length. What is the length of the cloth after washing?

Solution:

Length of a piece of cloth = 5 m

After washing, it is shrunked

$$= \frac{1}{25} \text{ of } 5 \text{ m} = \frac{1}{5} \text{ m}$$

Length of cloth after washing

$$\begin{aligned}&= \left(5 - \frac{1}{5}\right) \text{ m} \\ &= \frac{25 - 1}{5} = \frac{24}{5} \text{ m} = 4\frac{4}{5} \text{ m}\end{aligned}$$

Question 3.

I bought wheat worth Rs. $12\frac{1}{2}$, rice worth Rs. $25\frac{3}{4}$ and vegetables worth Rs. $10\frac{1}{4}$. If I gave a hundred-rupee note to the shopkeeper; how much did he return to me

Solution:

Money given to Shopkeeper = Rs. 100

Total Amount of goods bought

$$= \text{Rs.} \left(12\frac{1}{2} + 25\frac{3}{4} + 10\frac{1}{4} \right)$$

(Wheat, Rice and Vegetable)

$$= \frac{25}{2} + \frac{103}{4} + \frac{41}{4}$$

$$= \frac{50 + 103 + 41}{4} = \text{Rs.} \frac{194}{4}$$

∴ Money returned by shopkeeper

$$= \text{Rs.} \left(100 - \frac{194}{4} \right) = \text{Rs.} \frac{400 - 194}{4}$$

$$= \frac{206}{4} = \text{Rs.} \frac{103}{2} = \text{Rs.} 51\frac{1}{2}$$

Question 4.

Out of 500 oranges in a box, $\frac{3}{25}$ are rotten and $\frac{1}{5}$ are kept for some guests. How many oranges are left in the box?

Solution:

Number of oranges = 500

$$\begin{aligned} \text{Bad oranges} &= \frac{3}{25} \text{ of } 500 = \frac{3}{25} \times 500 \\ &= 60 \end{aligned}$$

$$\begin{aligned} \text{Kept for guests} &= \frac{1}{5} \text{ of } 500 \\ &= \frac{1}{5} \times 500 = 100 \end{aligned}$$

∴ No of oranges which can be used

$$= 500 - 60 - 100 = 500 - 160 = \mathbf{340}.$$

Question 5.

An ornament piece is made of gold and copper. Its total weight is 96g. If $\frac{1}{12}$ of the ornament is copper, find the weight of gold in it.

Solution:

Total weight = 96 g

$$\text{Weight of copper} = \frac{1}{12} \text{ of } 96$$

$$= \frac{1}{12} \times 96 = 8 \text{ gm}$$

∴ Weight of gold = Total weight -
weight of copper = 96g - 8g = **88g**

Question 6.

A girl did half of some work on Monday and one-third of it on Tuesday. How much will she have to do on Wednesday in order to complete the work?

Solution:

Let total work done = 1

$$\text{Work done on Monday} = \frac{1}{2}$$

$$\text{Work done on Tuesday} = \frac{1}{3}$$

Work done on Wednesday = remaining work

$$= 1 - \left(\frac{1}{2} + \frac{1}{3} \right)$$

$$= 1 - \frac{3+2}{6} = 1 - \frac{5}{6}$$

$$= \frac{6-5}{6} = \frac{1}{6}$$

Work done on Wednesday = $\frac{1}{6}$ of work

Question 7.

A man spends $\frac{3}{8}$ of his money and still has Rs. 720 left with him. How much money did he have at first?

Solution:

Let a man has money = Re. 1

$$\text{Amount spent} = \frac{3}{8} \text{ of Re. 1} = \text{Rs. } \frac{3}{8}$$

$$\text{Amount left} = 1 - \frac{3}{8} = \frac{8-3}{8} = \text{Re. } \frac{5}{8}$$

$$\therefore \frac{5}{8} \text{ of his total money} = \text{Rs. 720}$$

$$\therefore \text{Total money} = \text{Rs. } \frac{720 \times 8}{5}$$

$$= \text{Rs. } 144 \times 8 = \text{Rs. 1152}$$

Question 8.

In a school, $\frac{4}{5}$ of the students are boys, and the number of girls is 100. Find the number

of boys.

Solution:

Let the total number of boys and girls = x

$$\text{Total number of boys} = \frac{4}{5} \text{ of } x = \frac{4x}{5}$$

According to question, total strength of School,

$$x - \frac{4x}{5} = 100$$

$$\frac{5x - 4x}{5} = 100$$

$$\frac{x}{5} = 100 \Rightarrow x = 500$$

$$\begin{aligned} \therefore \text{Number of boys} &= \text{total strength} - \text{girls} \\ &= 500 - 100 = 400. \end{aligned}$$

Question 9.

After finishing $\frac{3}{4}$ of my journey, I find that 12 km of my journey is covered. How much distance is still left to be covered ?

Solution:

Let the total journey = x ,

$$\text{distance covered} = \frac{3}{4} = 12 \text{ km}$$

Then, according to question $\frac{3}{4}$ of $x = 12$ km

$$x = 12 \times \frac{4}{3} \Rightarrow x = 16 \text{ km}$$

$$\begin{aligned} \text{Distance left} &= \text{total distance} - \text{distance} \\ \text{cover} &= 16 - 12 = 4 \text{ km.} \end{aligned}$$

Question 10.

When Ajit travelled 15 km, he found that one-fourth of his journey was still left. What was the full length of the journey?

Solution:

Let the total length of journey = x

Journey travelled = 15 km

Journey still left = $\frac{1}{4}$ of x

Now, according to question,

$$x - 15 = \frac{1}{4} \text{ of } x$$

$$x - 15 = \frac{x}{4}$$

$$x - \frac{x}{4} = 15$$

$$\frac{4x - x}{4} = 15$$

$$3x = 15 \times 4$$

$$x = \frac{15 \times 4}{3} = 20 \text{ km}$$

\therefore Total length of the journey = **20 km.**

Question 11.

In a particular month, a man earns Rs. 7,200. Out of this income, he spends $\frac{3}{10}$ on food, $\frac{1}{4}$ on house rent, $\frac{1}{10}$ on insurance and $\frac{2}{25}$ on holidays. How much did he save in that month ?

Solution:

Earning of a man in a particular month
= Rs. 7200

Amount spent on food = $\frac{3}{10}$ of Rs. 7200
= Rs. 2160

Amount spent on house rent

= $\frac{1}{4}$ of Rs. 7200 = Rs. 1800

Amount spent on insurance

= $\frac{1}{10}$ of Rs. 7200 = Rs. 720

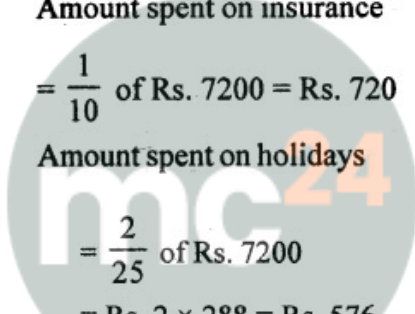
Amount spent on holidays

= $\frac{2}{25}$ of Rs. 7200

= Rs. 2 × 288 = Rs. 576

∴ Total amount spent = Rs. (2160 + 1800
+ 720 + 576) = Rs. 5256

∴ Amount saved = Rs. 7200 – Rs. 5256
= Rs. 1944



Myclass24
Your Class. Your Pace.