



Exercise 10A

Q32.

**Answer :**

CP of sugar = Rs 4500

Profit on one-third of the sugar = 10%

CP of one-third of the sugar = Rs  $\frac{4500}{3}$  = **Rs. 1500**

$$\begin{aligned}\text{SP of one - third of the sugar} &= \frac{100 + \text{gain \%}}{100} \times \text{CP} \\ &= \text{Rs } \frac{110}{100} \times 1500 \\ &= \text{Rs } 1650\end{aligned}$$

Now, profit = Rs (1650 - 1500) = Rs 150

At a profit of 12%, we have:

$$\begin{aligned}\text{SP of sugar} &= \frac{100 + \text{gain \%}}{100} \times \text{CP} \\ &= \text{Rs } \frac{112}{100} \times 4500 \\ &= \text{Rs } 5040\end{aligned}$$

$\therefore$  Gain = Rs (5040 - 4500) = Rs 5400

Profit on the remaining amount of sugar = Rs (540 – 150) = Rs 390

CP of the remaining sugar = Rs (4500 – 1500) = Rs 3000

$$\begin{aligned}\text{Gain percentage} &= \left( \frac{\text{gain}}{\text{CP}} \times 100 \right) \% \\ &= \left( \frac{390}{3000} \times 100 \right) \% \\ &= 13\%\end{aligned}$$

Therefore, the profit on the remaining amount of sugar is 13%.

Q33.

**Answer :**

CP of the land = Rs 96000

CP of two-fifth of the land =  $\frac{96000 \times 2}{5}$  = **Rs. 38400**

$$\begin{aligned}\text{SP of } \frac{2}{5} \text{ of the land} &= \frac{100 - \text{loss \%}}{100} \times \text{CP} \\ &= \frac{94}{100} \times 38400 \\ &= \text{Rs } 36096\end{aligned}$$

Loss = Rs (38400 – 36096) = Rs 2304

At a gain of 10%, we have:

$$\begin{aligned}\text{SP of the land} &= \frac{100 + \text{gain \%}}{100} \times \text{CP} \\ &= \text{Rs } \frac{110}{100} \times 96000 \\ &= \text{Rs } 105600\end{aligned}$$

Gain = Rs (105600 – 96000) = Rs 9600

Profit on the remaining land = Rs (9600 + 2304) = Rs 11904

CP of the remaining land = Rs (96000 – 38400) = Rs 57600

$$\begin{aligned}\therefore \text{Gain percentage} &= \left( \frac{\text{gain}}{\text{CP}} \times 100 \right) \% \\ &= \left( \frac{11904}{57600} \times 100 \right) \% \\ &= 20.67\%\end{aligned}$$

Therefore, the profit on the remaining part of land is 20.67%.

Q34.

**Answer :**

SP of the watch for Alex= Rs 1330

Loss percentage for Alex = 5%

$$\begin{aligned}\text{CP for Alex} &= \frac{\text{SP} \times 100}{100 - \text{loss \%}} \\ &= \frac{1330 \times 100}{100 - 5} \\ &= \frac{133000}{95} \\ &= \text{Rs } 1400\end{aligned}$$

Now, SP for Vinod = CP for Alex = Rs 1400

Gain percentage of the watch for Vinod = 12%

$$\begin{aligned}\text{CP of the watch for Vinod} &= \frac{\text{SP} \times 100}{100 + \text{gain \%}} \\ &= \text{Rs } \frac{1400 \times 100}{100 + 12} \\ &= \text{Rs } \frac{140000}{112} = \text{Rs } 1250\end{aligned}$$

Thus, Vinod paid Rs 1250 for the watch.

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