



Exercise 10A

Q1.

**Answer :**

(i)

$$\text{CP} = \text{Rs. } 620$$

$$\text{SP} = \text{Rs. } 713$$

Since  $\text{SP} > \text{CP}$ , there is a gain.

$$\text{Gain} = 713 - 620 = \text{Rs. } 93$$

$$\begin{aligned}\text{Gain percentage} &= \left( \frac{\text{gain}}{\text{CP}} \times 100 \right) \% \\ &= \left( \frac{93}{620} \times 100 \right) \% \\ &= 15\%\end{aligned}$$

(ii)

$$\text{CP} = \text{Rs } 675$$

$$\text{SP} = \text{Rs } 630$$

Since  $\text{SP} < \text{CP}$ , there is a loss.

$$\text{Loss} = 675 - 630 = \text{Rs. } 45$$

$$\begin{aligned}\text{Loss percentage} &= \left( \frac{\text{Loss}}{\text{CP}} \times 100 \right) \% \\ &= \left( \frac{45}{675} \times 100 \right) \% \\ &= 6 \frac{2}{3} \%\end{aligned}$$

(iii)

$$\text{CP} = \text{Rs. } 345$$

$$\text{SP} = \text{Rs. } 372.60$$

Since  $SP > CP$ , there is a gain.

$$\text{Gain} = 372.60 - 345 = \text{Rs. } 27.6$$

$$\begin{aligned}\text{Gain percentage} &= \left( \frac{\text{gain}}{CP} \times 100 \right) \% \\ &= \left( \frac{27.6}{345} \times 100 \right) \% \\ &= \left( \frac{2760}{345} \right) \% \\ &= 8\%\end{aligned}$$

(iv)

$$CP = \text{Rs } 80$$

$$SP = \text{Rs } 76.80$$

Since  $SP < CP$ , there is a loss.

$$\text{Loss} = 80 - 76.80 = \text{Rs. } 3.2$$

$$\begin{aligned}\text{Loss percentage} &= \left( \frac{\text{loss}}{CP} \times 100 \right) \% \\ &= \left( \frac{3.2}{80} \times 100 \right) \% \\ &= \left( \frac{32}{80} \times 100 \right) \% \\ &= 4\%\end{aligned}$$

(iii)

$$CP = \text{Rs. } 875$$

$$\text{Loss percentage} = 12\%$$

$$\begin{aligned}SP &= \frac{(100 - \text{loss } \%)}{100} \times CP \\ &= \frac{(100 - 12)}{100} \times 875 \\ &= \frac{77000}{100} \\ &= \text{Rs. } 770\end{aligned}$$

(iv)

$$CP = \text{Rs. } 645$$

$$\text{CP} = \text{Rs. } 645$$

$$\text{Loss percentage} = 13 \frac{1}{3} \% = \frac{40}{3} \%$$

$$\begin{aligned} \text{SP} &= \frac{(100 - \text{loss } \%)}{100} \times \text{CP} \\ &= \frac{\left(100 - \frac{40}{3}\right)}{100} \times 645 \\ &= \frac{\left(\frac{300 - 40}{3}\right)}{100} \times 645 \\ &= \left(\frac{260}{3}\right) \times \left(\frac{1}{100}\right) \times 645 \\ &= \text{Rs. } 559 \end{aligned}$$

Q3.

Answer :

(i)

$$\text{SP} = \text{Rs. } 1596$$

$$\text{Gain percentage} = 12\%$$

$$\begin{aligned} \text{CP} &= \frac{100}{(100 + \text{gain } \%)} \times \text{SP} \\ &= \frac{100}{(100 + 12)} \times 1596 \\ &= \text{Rs. } 1425 \end{aligned}$$

(ii)

$$\text{SP} = \text{Rs. } 2431$$

$$\text{Loss percentage} = 6 \frac{1}{2} \% = \frac{13}{2} \%$$

$$\begin{aligned} \text{CP} &= \frac{100}{(100 - \text{loss } \%)} \times \text{SP} \\ &= \frac{100}{\left(100 - \frac{13}{2}\right)} \times 2431 \end{aligned}$$

$$= \frac{100 \times 2}{187} \times 2431$$

$$= \text{Rs. } 2600$$

(iii)

$$\text{SP} = \text{Rs. } 657.60$$

$$\text{Loss percentage} = 4\%$$

$$\text{CP} = \frac{100}{(100 - \text{loss \%})} \times \text{SP}$$

$$= \frac{100}{(100 - 4)} \times 657.60$$

$$= \text{Rs. } 685$$

(iv)

$$\text{SP} = \text{Rs. } 34.40$$

$$\text{Gain percentage} = 7\frac{1}{2}\% = \frac{15}{2}\%$$

$$\text{CP} = \frac{100}{(100 + \text{gain \%})} \times \text{SP}$$

$$= \frac{100}{\left(100 + \frac{15}{2}\right)} \times 34.40$$

$$= \frac{100 \times 2}{215} \times 34.40$$

$$= \text{Rs. } 32$$

Q4.

**Answer :**

$$\text{CP of the iron safe} = \text{Rs. } 5580$$

$$\text{Transportation} = \text{Rs. } 170$$

$$\text{Total CP} = \text{Rs } (5580 + 170) = \text{Rs. } 5750$$

$$\text{SP} = \text{Rs. } 6440$$

Since  $\text{SP} > \text{CP}$ , Manjit makes a profit.

$$\text{Gain} = 6440 - 5750$$

$$= \text{Rs } 690$$

$$\text{Gain percentage} = \left( \frac{\text{gain}}{\text{total CP}} \times 100 \right) \%$$

$$= \left( \frac{690}{5750} \times 100 \right) \%$$

$$= 12\%$$

Q5.

**Answer :**

$$\text{CP of the iron safe} = \text{Rs. } 55800$$

CP of the car = Rs. 73500

Repairs = Rs. 10300

Insurance = Rs. 2600

Total CP = 73500 + 10300 + 2600 = Rs. 86400

SP = Rs. 84240

Since  $SP < CP$ , Robin has a loss.

Loss = 86400 - 84240

= Rs. 2160

Loss percentage =  $\left( \frac{\text{loss}}{\text{total CP}} \times 100 \right) \%$

=  $\left( \frac{2160}{86400} \times 100 \right) \%$

Q6.

Answer :

The price of rice is Rs 18 per kg.

According to the question, we have :

$$\text{Cost for 20 kg of rice} = 20 \times 18 = \text{Rs. } 360$$

$$\text{Cost for 25 kg of rice} = 25 \times 16 = \text{Rs. } 400$$

$$\text{Total CP} = 360 + 400 = \text{Rs. } 760$$

$$\text{Also, total quantity of rice} = 20 + 25 = 45 \text{ kg}$$

$$\text{SP} = 45 \times 19 = \text{Rs. } 855$$

Since  $\text{SP} > \text{CP}$ , there is a gain.

$$\text{Now, gain} = 855 - 760 = \text{Rs. } 95$$

$$\text{Gain percentage} = \left( \frac{\text{gain}}{\text{total CP}} \times 100 \right) \%$$

$$= \left( \frac{95}{760} \times 100 \right) \%$$

$$= 12 \frac{1}{2} \%$$

Q7.

Answer :

Let 5 kg of coffee be mixed with 2 kg of chicory.

$$\text{CP of the mixture} = \text{Rs } (250 \times 5 + 75 \times 2)$$

$$= \text{Rs } (1250 + 150)$$

$$= \text{Rs. } 1400$$

$$\text{SP of the mixture} = \text{Rs } (7 \times 230) = \text{Rs. } 1610$$

Since  $\text{SP} > \text{CP}$ , there is a gain.

$$\text{Now, gain} = \text{Rs } (1610 - 1400)$$

$$= \text{Rs. } 210$$

$$\text{Gain percentage} = \left( \frac{\text{gain}}{\text{total CP}} \times 100 \right) \%$$

$$= \left( \frac{210}{1400} \times 100 \right) \%$$

$$= 15\%$$

Q8.

Answer :

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