Exercise 10A

Q1.

Answer :

(i)

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

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

Since SP > CP, there is a gain.

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

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

$$= \left(\frac{93}{620} \times 100\right)\%$$

$$= 15\%$$

(ii)

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

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

Since SP < CP, there is a loss.

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

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

$$= \left(\frac{45}{675} \times 100\right)\%$$

$$= 6\frac{2}{3}\%$$

(iii)

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

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

Since SP > CP, there is a gain.

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

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

$$= \left(\frac{27.6}{345} \times 100\right)\%$$

$$= \left(\frac{2760}{345}\right)\%$$

$$= 8\%$$

(iv)

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

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

Since SP < CP, there is a loss.

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

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

$$= \left(\frac{3.2}{80} \times 100\right)\%$$

$$= \left(\frac{32}{80} \times 100\right)\%$$

$$= 4\%$$

(iii)

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

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

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

$$= \frac{(100-12)}{100} \times 875$$

$$= \frac{77000}{100}$$

$$= \text{Rs. } 770$$

(iv)

CP = Rs. 645

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

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

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

$= \frac{\left(100 - \frac{40}{3}\right)}{100} \times 645$

$= \frac{\left(\frac{300 - 40}{3}\right)}{100} \times 645$

$= \left(\frac{260}{3}\right) \times \left(\frac{1}{100}\right) \times 645$

$= \text{Rs. } 559$

Q3.

Answer :

(i)

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

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

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

$= \frac{100}{(100+12)} \times 1596$

$= \text{Rs. } 1425$

(ii)

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

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

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

$= \frac{100}{\left(100 - \frac{13}{2}\right)} \times 2431$

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

$= \text{Rs. } 2600$

(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 :

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

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

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

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

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

$\text{Gain} = 6440 - 5750$

$= \text{Rs } 690$

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

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

$= 12\%$

Q5.

Answer :

CP of the car = Rs. 73500

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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

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

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

Q6.

Answer :

The price of rice is Rs 18 per kg.
According to the question, we have :
Cost for 20 kg of rice $= 20 \times 18 =$ Rs. 360
Cost for 25 kg of rice $= 25 \times 16 =$ Rs. 400
Total CP $= 360 + 400 =$ Rs. 760
Also, total quantity of rice $= 20 + 25 = 45$ kg
SP $= 45 \times 19 =$ Rs. 855
Since SP $>$ CP, there is a gain.
Now, gain $= 855 - 760 =$ 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.

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

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

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

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

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

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

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

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

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

$$= 15\%$$

Q8.

Answer :

********** END **********