



Exercise 11A

Q1

**Answer :**

(i) CP = Rs. 950

Gain = 6%

$$\begin{aligned} \text{SP} &= \left\{ \frac{(100 + \text{Gain \%})}{100} \times \text{CP} \right\} \\ &= \left\{ \frac{(100 + 6)}{100} \times 950 \right\} \\ &= \frac{106}{100} \times 950 \\ &= \frac{100700}{100} \\ &= \text{Rs. } 1007 \end{aligned}$$

(ii) CP = Rs. 9600

Gain =  $16\frac{2}{3}\%$  =  $\frac{50}{3}\%$

$$\begin{aligned} \text{SP} &= \left\{ \frac{(100 + \text{Gain \%})}{100} \times \text{CP} \right\} \\ &= \left\{ \frac{\left(100 + \frac{50}{3}\right)}{100} \times 9600 \right\} \\ &= \frac{350}{300} \times 9600 \\ &= \frac{33600}{3} \\ &= \text{Rs. } 11200 \end{aligned}$$

(iii) CP = Rs. 1540

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

$$\begin{aligned}\text{SP} &= \left\{ \frac{(100 - \text{Loss \%})}{100} \times \text{CP} \right\} \\ &= \left\{ \frac{(100 - 4)}{100} \times 1540 \right\} \\ &= \frac{96}{100} \times 1540 \\ &= \frac{147840}{100} \\ &= \text{Rs. } 1478.40\end{aligned}$$

$$\text{(iv) CP} = \text{Rs. } 8640$$

$$\text{Loss} = 12 \frac{1}{2} \% = \frac{25}{2} \%$$

$$\begin{aligned}\text{SP} &= \left\{ \frac{(100 - \text{Loss \%})}{100} \times \text{CP} \right\} \\ &= \left\{ \frac{\left(100 - \frac{25}{2}\right)}{100} \times 8640 \right\} \\ &= \frac{175}{200} \times 8640 \\ &= \frac{1512000}{200} \\ &= \text{Rs. } 7560\end{aligned}$$

Q2

**Answer :**

(i) CP = Rs. 2400

SP = Rs. 2592

$$\text{Gain} = \text{SP} - \text{CP} = \text{Rs. } (2592 - 2400) = \text{Rs. } 192$$

$$\text{Gain\%} = \left( \frac{\text{Gain}}{\text{CP}} \times 100 \right) = \left( \frac{192}{2400} \times 100 \right) = 8$$

(ii) CP = Rs. 1650

SP = Rs. 1452

$$\text{Loss} = \text{CP} - \text{SP} = (1650 - 1452) = \text{Rs. } 198$$

$$\text{Loss\%} = \left( \frac{\text{Loss}}{\text{CP}} \times 100 \right) = \left( \frac{198}{1650} \times 100 \right) = 12$$

(iii) CP = Rs. 12000 and SP = Rs. 12800

$$\text{Gain} = \text{SP} - \text{CP} = (12800 - 12000) = \text{Rs. } 800$$

$$\text{Gain\%} = \left( \frac{\text{Gain}}{\text{CP}} \times 100 \right) = \left( \frac{800}{12000} \times 100 \right) = 6.66$$

(iv) CP = Rs. 1800

SP = Rs. 1611

$$\text{Loss} = \text{CP} - \text{SP} = (1800 - 1611) = \text{Rs. } 189$$

$$\text{Loss\%} = \left( \frac{\text{Loss}}{\text{CP}} \times 100 \right) = \left( \frac{189}{1800} \times 100 \right) = 10.5$$

Q3

**Answer :**

(i) SP = Rs. 924

Gain = 10%

$$\begin{aligned} \text{CP} &= \left\{ \frac{100}{(100 + \text{Gain } \%)} \times \text{SP} \right\} \\ &= \left\{ \frac{100}{(100 + 10)} \times 924 \right\} \\ &= \frac{92400}{110} \\ &= \text{Rs. 840} \end{aligned}$$

(ii) SP = Rs. 1755

Gain =  $12\frac{1}{2}\%$  =  $\frac{25}{2}\%$

$$\begin{aligned} \text{CP} &= \left\{ \frac{100}{(100 + \text{Gain } \%)} \times \text{SP} \right\} \\ &= \left\{ \frac{100}{\left(100 + \frac{25}{2}\right)} \times 1755 \right\} \\ &= \left\{ \frac{200}{225} \times 1755 \right\} \\ &= \frac{351000}{225} \\ &= \text{Rs. 1560} \end{aligned}$$

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