

chapte-12 Profit and loss Exercise-12.1

Solution - 01:-

(i) we have,
Cost price = RS 1200,

Selling price = RS 1350,

Profit / Loss = ?

Clearly $S.P > C.P$ so, there will be Profit
Given by

$$\begin{aligned}\text{Profit} &= S.P - C.P \\ &= RS 1350 - RS 1200 \\ &= RS 150\end{aligned}$$

(ii) we have,

Cost price = RS 1270

Selling price = RS 1250

Clearly $S.P < C.P$ so, there will be loss,
given by

$$\begin{aligned}\text{Loss} &= C.P - S.P \\ &= 1270 - 1250 = RS 20.\end{aligned}$$

(iii) we have,

Cost price = RS 720.

Selling price = ?

Profit = RS 55.50

Profit = $S.P - C.P$ [$Pft = S.P - C.P$]

Profit = $S.P - C.P$

$$C.P = 720 + 55.50 = 775.50$$

(iv) we have,

$C.P = ?$

$S.P = RS 1254$

Loss = RS 32

Loss = $C.P - S.P$

$C.P = S.P + \text{Loss}$ ☒

$$C.P = 1254 + 32$$

$$C.P = RS 1286$$

Solution - 02:-

(i) we have,

$C.P = RS 1265$

$S.P = RS 1253$

$$\begin{aligned}\text{Loss} &= C.P - S.P \\ &= RS 1265 - RS 1253 \\ &= RS 12.\end{aligned}$$

(ii) we have,

$C.P = RS \dots$

$S.P = RS 450$

Profit = RS 150

Profit = $S.P - C.P$

$$150 = S.P - C.P$$

$$C.P = 450 - 150$$

$$C.P = RS 300.$$

(iii) we have.

$$C.P = \text{Rs } 3355$$

$$S.P = \text{Rs } 7355$$

Clearly $S.P > C.P$, so there will be Profit given by.

$$\text{Profit} = S.P - C.P$$

$$= \text{Rs } 7355 - \text{Rs } 3355$$

$$= \text{Rs } 4,000.$$

(iv) we have.

$$C.P = \text{Rs } \dots$$

$$S.P = \text{Rs } 2390$$

$$\text{Loss} = \text{Rs } 5.50$$

$$\text{Loss} = C.P - S.P$$

$$C.P = \text{Loss} + S.P$$

$$= 5.5 + 2390$$

$$= 2395.5$$

$$C.P = 2395.5$$

Solution-03:-

(i) we have,

$$C.P = \text{Rs } 4,560$$

$$S.P = \text{Rs } 5,000$$

Clearly, $S.P > C.P$, so there will be Profit

Percentage is given by

$$\text{Profit} = S.P - C.P$$

$$\text{Profit} = \text{Rs } 5,000 - \text{Rs } 4,560$$

$$= \text{Rs } 440$$

$$\text{Profit \%} = \frac{\text{Profit}}{C.P} \times 100$$

$$= \frac{440}{4560} \times 100$$

$$= 9.65\%$$

(ii) we have

$$C.P = \text{Rs } 2600, S.P = 2470$$

Clearly, $S.P < C.P$, so there will be loss. is given by

$$\text{Loss} = C.P - S.P$$

$$= 2600 - 2470 = \text{Rs } 130$$

$$\text{Loss \%} = \frac{\text{Loss}}{C.P} \times 100 = \frac{130}{2600} \times 100 = 5\%$$

Solution-3:-

(ii) we have,

$$C.P = \text{Rs } 332, S.P = 350$$

Here $S.P > C.P$, so there will be Profit %.

$$\text{Profit} = S.P - C.P$$

$$\text{Profit} + C.P = S.P$$

$$\text{Profit} = 350 - 332 = \text{Rs. } 18.$$

$$\text{Profit \%} = \frac{\text{Profit}}{C.P} \times 100$$

$$= \frac{18}{332} \times 100.$$

$\Rightarrow$

$$= 5.42\%$$

(v) we have,

$$C.P = \text{Rs } 1500, S.P = \text{Rs } 1500$$

$$\text{Here, Profit} = S.P - C.P \quad [\because C.P = S.P]$$

$$= 1500 - C.P$$

$$= 1500 - 1500$$

$$= 0$$

$$\text{Profit \%} = 0.$$

Solution-4:-

$$(i) C.P = \text{Rs } 4,000$$

$$\text{Gain} = \text{Rs } 40.$$

$$\text{Gain} = S.P - C.P$$

$$\text{Gain} + C.P = S.P$$

$$S.P = 4,000 + 40$$

$$S.P = 4,040.$$

$$\text{Gain \%} = \frac{\text{Gain}}{C.P} \times 100$$

$$= \frac{40}{4000} \times 100$$

$$= 1\%$$

(ii) we have

$$S.P = \text{Rs } 1272, \text{ Loss} = 328$$

$$\text{Loss} = C.P - S.P$$

$$C.P = \text{Loss} + S.P$$

$$= 1272 + 328$$

$$= 1600$$

$$\text{Loss \%} = \frac{328}{1600} \times 100$$

$$= 20.5\%$$

$$4.(iii) S.P = RS 1820$$

$$\text{gain} = RS 420$$

$$C.P = S.P - \text{gain}$$

$$= 1820 - 420$$

$$= 1400$$

$$\text{gain}\% = \frac{420}{1400} \times 100$$

$$= 30\%$$

Solution-6:

we have,

grain merchant sold = 600 Quintals

$$\text{Profit}\% = 7\%$$

$$\text{Quintal rice cost} = RS 250$$

$$C.P = 600 \times \text{Quintal rice cost} + RS 1000$$

$$= 600 \times 250 + RS 1000$$

$$= 150000 + RS 1000$$

$$= 1,51,000$$

$$\text{Profit}\% = \frac{\text{Profit}}{C.P} \times 100$$

$$\frac{7 \times 1,51,000}{100} = \text{Profit}$$

$$\Rightarrow \text{Profit} = 10,570$$

$$\therefore \text{Selling Price} = 1,51,000 + 10,570 = 1,61,570$$

Solution-07:

$$\text{Cost Price for 4 dozen Pencils} = RS 10.80 \times 4$$

$$\text{Selling Price} = ? \quad = RS 43.20$$

$$\text{Selling Price} = 48 \times 80 \text{ paise}$$

$$= RS 38.40$$

$$[4 \text{ dozen} = 4 \times 12 = 48]$$

$$\text{Loss} = C.P - S.P \quad [C.P > S.P]$$

$$= 43.20 - 38.40$$

$$= 4.8$$

$$\text{Loss}\% = \frac{4.8}{43.20} \times 100$$

$$= \frac{100}{9}\%$$

$$\text{Loss}\% = \frac{100}{9}\%$$



Solution - 08:-

We have

Oranges buys at ₹6 per dozen

$$\text{Cost Price one Orange} = \frac{₹6}{12}$$

$$\text{Cost price for 5 oranges} = \frac{₹6}{12} \times 5 \quad [\because \text{dozen} = 12]$$

$$\text{Selling Price for 5 oranges} = ₹13.$$

$$\text{Gain} = \text{S.P} - \text{C.P} \quad [\text{S.P} > \text{C.P}]$$

$$= - \frac{₹6 \times 5}{12} + 13$$

$$= \frac{156 - 130}{12}$$

$$= \frac{₹26}{12}$$

$$\text{Gain\%} = \frac{\text{Gain}}{\text{C.P}} \times 100$$

$$= \frac{\frac{₹26}{12}}{\frac{₹6 \times 5}{12}} \times 100$$

$$= \frac{100}{5} \% = 20\%$$

Solution - 09:-

We have

$$\text{Purchased amount} = ₹3,65,000$$

$$\text{Repaired Price} = ₹1,35,000$$

$$\text{Cost Price} = \text{purchased price} + \text{Repair}$$

$$= ₹3,65,000 + ₹1,35,000$$

$$= ₹5,00,000$$

$$\text{Selling Price} = ₹5,50,000.$$

$$\text{Gain} = \text{S.P} - \text{C.P} \quad [\text{S.P} > \text{C.P}]$$

$$= ₹5,50,000 - ₹5,00,000$$

$$\text{Gain\%} = \frac{50,000}{5,00,000} \times 100$$

$$= \frac{100}{10} \%$$

$$= 10\%$$

Solution-10:-

we have,

$$\text{Cost Price} = 840$$

$$\text{Selling Price} = \text{RS } 910.$$

$$\begin{aligned}\text{Gain} &= 910 - 840 \\ &= \text{RS } 70.\end{aligned} \quad [\text{S.P} > \text{C.P}]$$

$$\begin{aligned}\text{Gain \%} &= \frac{70}{840} \times 100 \\ &= \frac{25}{3} \%. \end{aligned} \quad \left[\frac{\text{Gain}}{\text{C.P}} \times 100 = \text{Gain \%} \right]$$

Solution-11:-

we have, $\text{C.P} = \text{RS } 120.$

$$\text{Profit \%} = 10\%$$

$$\frac{\text{Gain}}{\text{C.P}} \times 100 = 10$$

$$\text{Gain} = \frac{120 \times 10}{100}$$

$$\text{Gain} = \text{RS } 12$$

$$\text{S.P} = \text{C.P} + \text{Gain}$$

$$= 120 + 12$$

$$= 132.$$

Solution-12:-

we have,

$$\text{cost price for 50 bananas} = \text{RS } 135$$

$$\text{cost price for one banana} = \frac{135}{50}$$

$$\text{Profit \%} = \frac{\text{Profit}}{\text{C.P}} \times 100$$

$$20 = \frac{\text{Profit}}{\frac{135}{50}} \times 100$$

$$[\because \text{No of bananas sold} = \text{Total} - \text{rotten}]$$

$$= 50 - 5$$

$$= 45 \text{ dozen bananas}$$

$$\text{cost price for 45 dozen bananas} = \frac{135}{50} \times 45$$

$$\text{Profit} = \frac{20 \times 135 \times 45}{50} \times 100$$

$$= \frac{270 \times 45}{50}$$

$$= 24.3$$

$$\text{selling Price} = \text{C.P} + \text{Gain}$$

$$= 135 + 24.3 = 159.3$$

$$\text{price per dozen} = \frac{159.3}{45} = 3.6$$

Solution-13:-

$$\begin{aligned}\text{cost price} &= \text{No. of dozen eggs} \times \text{dozen cost} \\ &= 50 \times 6.4 \\ &= \text{Rs } 320\end{aligned}$$

$$\begin{aligned}\text{selling price} &= \text{Total no of eggs cost} - \text{defective eggs cost} \\ &= 50 \times 12 \times 55 \text{ paise} - 20 \times 55 \text{ paise} \\ [\because 1 \text{ dozen} &= 12 \text{ eggs}]\end{aligned}$$

$$\begin{aligned}\text{S.P} &= \text{Rs } \frac{600 \times 55}{100} - \text{Rs } \frac{200 \times 55}{100} \quad [\because 1 \text{ paise} = \frac{1}{100} \text{ Rs}] \\ &= 330 - 11 \\ &= 319 \\ \text{C.P} &> \text{S.P}\end{aligned}$$

$$\begin{aligned}\therefore \text{loss} &= \text{C.P} - \text{S.P} \\ &= 320 - 319 = 1 \text{ ₹}\end{aligned}$$

$$\begin{aligned}\text{loss \%} &= \frac{\text{loss}}{\text{C.P}} \times 100 \\ &= \frac{100}{320} = \frac{5}{16} \% \text{ loss}\end{aligned}$$

Solution-14:-

we have,

$$400 \text{ eggs cost price} = ?$$

$$1 \text{ dozen eggs} \rightarrow \text{Rs } 8.40$$

$$\frac{400}{12} \text{ dozen eggs} \rightarrow ? \quad [\because 1 \text{ dozen} = 12 \text{ eggs}]$$

Let 400 eggs cost price say 'x'

$$\begin{aligned}x &= \frac{400 \times 8.40}{12} \\ &= \text{Rs } 280\end{aligned}$$

$$\begin{aligned}\text{cost price for one egg} &= \frac{8.40}{12} \\ &= 70 \text{ paise}\end{aligned}$$

$$\begin{aligned}\text{cost price for 100 eggs} &= 100 \times 70 \text{ paise} \\ &= \text{Rs } 70\end{aligned}$$

$$\text{Profit \%} = \frac{\text{Profit}}{\text{C.P}} \times 100 \quad \text{₹}$$

$$15 = \frac{\text{Profit}}{70} \times 100$$

$$\Rightarrow \text{Profit} = \frac{15 \times 70}{100} = \text{Rs } 10.5$$

$$\text{Selling Price for 100 eggs} = 70 + 10.5 = \text{Rs } 80.5$$