

Find the profit or loss percent

① ② CP = ₹520, SP = ₹624

As SP > CP so there is profit

$$\text{Profit} = \text{SP} - \text{CP} = ₹624 - ₹520 = ₹104$$

$$\text{Required Profit \%} = \frac{\text{Profit}}{\text{CP}} \times 100$$

$$= \frac{₹104}{₹520} \times 100$$

$$= \frac{₹104 \times 100}{₹520} = \frac{₹10400}{₹520} = 20\%$$

Ans. Required Profit Percent is 20%.

③ CP = ₹2200, SP = ₹1540

As CP > SP so there is loss

$$\text{Loss} = \text{CP} - \text{SP} = ₹2200 - ₹1540 = ₹660$$

$$\text{Required Loss \%} = \frac{\text{Loss}}{\text{CP}} \times 100$$

$$= \frac{₹660}{₹2200} \times 100$$

$$= \frac{₹66000}{₹2200} = 30\%$$

Ans. Required Loss Percent is 30%.

④ CP = ₹1650, SP = ₹1666.50

As SP > CP so there is Profit

$$\text{Profit} = \text{SP} - \text{CP} = ₹1666.50 - ₹1650 = ₹16.50$$

$$\text{Required Profit \%} = \frac{\text{Profit}}{\text{CP}} \times 100$$

$$= \frac{₹16.50}{₹1650} \times 100$$

$$= \frac{₹16.50 \times 100}{₹1650}$$

$$= \frac{₹1650}{₹1650} = 1\%$$

Ans. The required profit percent is 1%.

E) (1) Given cost price of a gas stove = ₹1600

Given selling price of it = ₹2240

As  $SP > CP$

So there is profit -

$$\text{Profit amount} = SP - CP = ₹2240 - ₹1600 = ₹640$$

$$\text{Required Profit Percent} = \frac{\text{Profit}}{\text{CP}} \times 100$$

$$= \frac{₹640}{₹1600} \times 100$$

$$= \frac{₹640 \times 100}{₹1600} = \frac{₹64000}{₹1600} = 40$$

Ans. Here profit % is 40%.

## PROFIT AND LOSS PER CENT

Mostly we express the profit and loss per cent. We calculate the profit and loss per cent as below

$$\text{Profit per cent} = \frac{\text{Profit}}{\text{Cost Price}} \times 100$$

$$\text{Loss per cent} = \frac{\text{Loss}}{\text{Cost Price}} \times 100$$

Let us consider some examples.

**Example 1.** The cost price of a pen is Rs 25. Mahesh sold it at Rs 30. Find the profit per cent.

**Solution.**

$$\begin{aligned}\text{Cost price of the pen} &= \text{Rs } 25 \\ \text{Selling price of the pen} &= \text{Rs } 30 \\ \text{Profit} &= \text{S.P.} - \text{C.P.} \\ &= \text{Rs. } 30 - \text{Rs } 25 \\ &= \text{Rs } 5\end{aligned}$$

$$\begin{aligned}\text{Profit per cent} &= \frac{\text{Profit}}{\text{Cost price}} \times 100 \\ &= \frac{5}{25} \times 100 = \frac{500}{25} = 20\end{aligned}$$

So, profit = 20%

**Example 2.** A chair was bought for Rs 200 and sold for Rs 175. Find the loss per cent.

**Solution.**

$$\begin{aligned}\text{Cost price of the chair} &= \text{Rs } 200 \\ \text{Selling price of the chair} &= \text{Rs } 175 \\ \text{Loss} &= \text{C.P.} - \text{S.P.} = \text{Rs } 200 - \text{Rs } 175 = \text{Rs } 25\end{aligned}$$

$$\begin{aligned}\text{Loss per cent} &= \frac{\text{Loss}}{\text{Cost price}} \times 100 \\ &= \frac{\text{Rs } 25}{\text{Rs } 200} \times 100 = \frac{25 \times 100}{200} \\ &= \frac{25}{2} = 12\frac{1}{2}\end{aligned}$$

So, loss =  $12\frac{1}{2}\%$