



Profit Percent and Loss Percent

Understanding Notes:

- Profit Percent and Loss Percent tell us how much profit or loss is made compared to the Cost Price.
- Profit Percent is calculated when there is a gain on selling an item.
- Loss Percent is calculated when there is a loss on selling an item.
- Both Profit and Loss are always calculated based on the Cost Price (unless stated otherwise).
- Profit Percent and Loss Percent help in comparing different transactions easily.

Important Points:


- Profit = Selling Price (SP) – Cost Price (CP)
- Loss = Cost Price (CP) – Selling Price (SP)
- Profit Percent = $\left(\frac{\text{Profit}}{CP}\right) \times 100$
- Loss Percent = $\left(\frac{\text{Loss}}{CP}\right) \times 100$
- If $SP > CP$, there is a Profit.
- If $SP < CP$, there is a Loss.
- $CP = \frac{SP \times 100}{100 + \text{Profit \%}}$
- $CP = \frac{SP \times 100}{100 - \text{Loss \%}}$
- $SP = \left(CP \times \frac{100 + \text{Profit \%}}{100}\right)$
- $SP = \left(CP \times \frac{100 - \text{Loss \%}}{100}\right)$

Different Types of Examples with Solutions:

Example Easy (Find Profit Percent):

- A shopkeeper bought a bat for ₹500 and sold it for ₹600. Find the profit percent.

Solution: Profit = SP – CP = 600 – 500 = ₹100


$$\text{Profit Percent} = \left(\frac{100}{500} \right) \times 100 = 20\%$$

Example Easy (Find Loss Percent)

➤ A bicycle was bought for ₹2000 and sold for ₹1800. Find the loss percent.

Solution: $\text{Loss} = \text{CP} - \text{SP} = 2000 - 1800 = ₹200$

$$\text{Loss Percent} = \left(\frac{200}{2000} \right) \times 100 = 10\%$$

Example Moderate (Find SP when Profit Percent is given)

➤ Find the selling price if Cost Price is ₹150 and Profit is 30%.

Solution: $\text{SP} = \left(\frac{\text{CP} \times 100 + \text{Profit \%}}{100} \right)$

$$\text{SP} = \frac{150 \times 130}{100} = ₹195$$

Example Moderate (Find SP when Loss Percent is given)

➤ A trader bought a shirt for ₹400. At what price should he sell it to have a loss of 15%?

Solution: $\text{SP} = \frac{\text{CP} \times (100 - \text{Loss \%})}{100}$

$$\text{SP} = \frac{400 \times 85}{100} = ₹340$$

Example Moderate (Find CP when SP and Profit Percent are given)

➤ A man sold an article for ₹660 at a profit of 10%. Find the cost price.

Solution: $\text{CP} = \frac{\text{SP} \times 100}{100 + \text{Profit \%}}$

$$\text{CP} = \frac{660 \times 100}{110}$$

$$\text{CP} = ₹600$$

Summary Points:

- Profit Percent = $\left(\frac{\text{Profit}}{\text{CP}} \right) \times 100$
- Loss Percent = $\left(\frac{\text{Loss}}{\text{CP}} \right) \times 100$
- $\text{SP} > \text{CP}$ means Profit, $\text{SP} < \text{CP}$ means Loss.
- Use the correct formula to find missing values like CP, SP, Profit %, or Loss %.
- Percent calculations always revolve around the Cost Price unless stated otherwise.