



Profit or Loss

Understanding: Profit or Loss

- When something is bought and sold, we may earn a profit or face a loss.
- Cost Price (C.P.) is the price at which an item is bought.
- Selling Price (S.P.) is the price at which the item is sold.

Profit

- When $S.P. > C.P.$
- Formula: Profit = S.P. – C.P.

Loss

- When $C.P. > S.P.$
- Formula: Loss = C.P. – S.P.

Profit% or Loss%

- Profit% = $\left(\frac{\text{Profit}}{C.P.}\right) \times 100$
- Loss% = $\left(\frac{\text{Loss}}{C.P.}\right) \times 100$

Examples with Solutions

Example

C.P. = ₹100, S.P. = ₹120

Profit = 120 – 100 = ₹20

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

Profit = ₹20, Profit% = 20%

Example

C.P. = ₹250, S.P. = ₹200

Loss = 250 – 200 = ₹50

Loss% = $\left(\frac{50}{250}\right) \times 100 = 20\%$

Loss = ₹50, Loss% = 20%



Example

A shopkeeper buys a toy for ₹150 and sells it for ₹180

$$\text{Profit} = 180 - 150 = ₹30$$

$$\text{Profit\%} = \left(\frac{30}{150}\right) \times 100 = 20\%$$

$$\text{Profit} = ₹30, \text{Profit\%} = 20\%$$

Example

A pen is bought for ₹40 and sold for ₹35

$$\text{Loss} = 40 - 35 = ₹5$$

$$\text{Loss\%} = \left(\frac{5}{40}\right) \times 100 = 12.5\%$$

$$\text{Loss} = ₹5, \text{Loss\%} = 12.5\%$$

Example

Find the S.P. if C.P. = ₹300 and Profit% = 10%

$$\text{Profit} = \left(\frac{10}{100}\right) \times 300 = ₹30$$

$$\text{S.P.} = \text{C.P.} + \text{Profit} = 300 + 30 = ₹330$$

$$\text{Selling Price} = ₹330$$

Summary Points

- Profit = S.P. – C.P., when S.P. > C.P.
- Loss = C.P. – S.P., when C.P. > S.P.
- Profit% = $\left(\frac{\text{Profit}}{\text{C.P.}}\right) \times 100$
- Loss% = $\left(\frac{\text{Loss}}{\text{C.P.}}\right) \times 100$
- Always calculate percent on cost price.
- Real-life uses include shopping, business, and savings.