

Profit and Loss



Cost Price (C.P.): It is the price at which a product is purchased by the seller.

Example: If a book is bought for ₹200, then its cost price is ₹200.

Selling Price (S.P.): It is the price at which the product is sold to a customer.

Example: If the same book is sold for ₹250, then the selling price is ₹250.

Profit: When the selling price is greater than the cost price, the seller makes a profit.

Example: C.P. = ₹200, S.P. = ₹250, Profit = S.P. – C.P. = ₹250 – ₹200 = ₹50.

Loss: When the selling price is less than the cost price, the seller incurs a loss.

Example: C.P. = ₹200, S.P. = ₹180, Loss = C.P. – S.P. = ₹200 – ₹180 = ₹20.

Marked Price (M.P.): It is the listed or printed price of the product before any discount is applied.

Example: If a shirt has a tag of ₹1000, the marked price is ₹1000, even if it's sold at a discount.

Profit Percentage: Profit percentage tells how much profit is made on the cost price, expressed as a percentage.

$$\text{Profit \%} = \left(\frac{\text{Profit}}{\text{Cost Price}} \right) \times 100$$

Example: A shopkeeper buys a toy for ₹200 and sells it for ₹250.

$$\text{Profit} = ₹250 - ₹200 = ₹50, \text{ Profit \%} = \left(\frac{50}{200} \right) \times 100 = 25\%$$

Loss Percentage: Loss percentage tells how much loss is incurred on the cost price, expressed as a percentage.

$$\text{Loss \%} = \left(\frac{\text{Loss}}{\text{Cost Price}} \right) \times 100$$

Example: A book is bought for ₹120 and sold for ₹90.

$$\text{Loss} = ₹120 - ₹90 = ₹30, \text{ Loss \%} = \left(\frac{30}{120} \right) \times 100 = 25\%$$

Discount: Discount is the reduction in the marked price of an item, usually given to attract buyers.

$$\text{Discount} = \text{Marked Price} - \text{Selling Price}$$

Example: Marked Price = ₹500, Selling Price = ₹400

$$\text{Discount} = ₹500 - ₹400 = ₹100$$

Discount Percentage: Discount percentage tells how much discount is given on the marked price, expressed as a percentage.

$$\text{Discount \%} = \left(\frac{\text{Discount}}{\text{Marked Price}} \right) \times 100$$

Example: Marked Price = ₹500, Discount = ₹100

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

Practice Questions

1. A shirt is bought for ₹500 and sold for ₹600. Calculate the profit percentage.

Sol: Profit = Selling Price – Cost Price

$$\text{Profit} = 600 - 500 = ₹100$$

$$\text{Profit \%} = \left(\frac{\text{Profit}}{\text{Cost Price}} \right) \times 100$$

$$\text{Profit \%} = \frac{100}{500} \times 100 = 20\%$$

2. A shirt is marked at ₹1200 and sold at a discount of 20%. Find the selling price.

Sol: Discount = 20% of 1200

$$\text{Discount} = \frac{20}{100} \times 1200 = ₹240$$

Selling Price = Marked Price – Discount

$$\text{Selling Price} = 1200 - 240 = ₹960$$

3. A mobile has a marked price of ₹10,000. After a discount, it is sold for ₹8,500. Find the discount percentage.

Sol: Discount = Marked Price – Selling Price

$$\text{Discount} = 10,000 - 8,500 = ₹1,500$$

$$\text{Discount \%} = \left(\frac{\text{Discount}}{\text{Marked Price}} \right) \times 100$$

$$\text{Discount \%} = \frac{1500}{10,000} \times 100 = 15\%$$