

# Profit and Loss

Profit and Loss

Profit = Selling price - Cost price  
Loss = Cost price - Selling price

Profit and loss may be expressed as a percentage of the cost price.

The producer produces a goods at some certain cost. When those goods are sold at a higher price than the production price, then there is profit. And, if the goods are sold at lower price than production cost, then he suffers a loss.

Thus, profit = Selling price - Cost price

or, Profit = S.P - C.P

Loss = Cost Price - Selling Price

or, Loss = C.P - S.P

For example:

If Renu bought a book for Rs 500 and sold it for Rs 600, then she made a profit of Rs 100 i.e profit = Rs 100

Similarly, if Ritesh bought a machine for Rs 200 and sold it for Rs 100, then he suffered a loss of Rs 100. i.e loss = Rs 200 - Rs 100 = Rs 100 (loss)

## Profit Percentage and Loss Percentage

$$\text{Percentage Profit} = \frac{\text{Selling Price} - \text{Cost Price}}{\text{Cost Price}} \times 100$$

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

For the purpose of comparison, we usually express the actual profit or loss as a percentage of a cost price.

For example; Samikshya sold a bag for Rs 60 which costs Rs 50 and shoes sold for Rs 110 which costs Rs 100. In each case, the shopkeeper makes a profit of Rs 10. It seems that in both cases profit is equally gained.

But in percentage we have:

In the first case, profit percentage =  $\frac{10}{50} \times 100 = 20\%$

In the second case, profit percent =  $\frac{10}{100} \times 100 = 10\%$

Hence, in the first case, she made more profit than in the second case, it is better and accurate method of comparison.

Have a look at these formulas:

$$\text{Percentage profit} = \frac{\text{actual profit}}{\text{C.P}} \times 100$$

$$\text{Percentage loss} = \frac{\text{actual loss}}{\text{C.P}} \times 100$$

## Examples

1. A pen costing Rs 28 sold for RS 36. Find the percentage profit.

Solution:

Cost price (CP) = RS 28

Selling price(SP) = Rs 35

Actual profit = SP - CP = Rs 35 - Rs 28 = Rs 7

Percentage profit =  $\frac{\text{actual profit}}{\text{CP}} \times 100 = \frac{7}{28} \times 100 = 25\%$

2. A book costing Rs 60 sold for Rs 50. Find the percentage loss.

Solution:

Cost price (CP) = Rs 60

Selling price (SP) = Rs 50

Actual loss = CP - SP = Rs 60 - Rs 50 = Rs 10

Percentage loss =  $\frac{\text{actual loss}}{\text{CP}} \times 100 = \frac{10}{60} \times 100 = 16\frac{2}{3}\%$