

Profit and Loss

IMPORTANT FACTS

Cost Price:

The price, at which an article is purchased, is called its **cost price**, abbreviated as **C.P.**

Selling Price:

The price, at which an article is sold, is called its **selling price**, abbreviated as **S.P.**

Profit or Gain:

If S.P. is greater than C.P., the seller is said to have a **profit** or **gain**.

Loss:

If S.P. is less than C.P., the seller is said to have incurred a **loss**.

IMPORTANT FORMULAE

1. $\text{Gain} = (\text{S.P.}) - (\text{C.P.})$
2. $\text{Loss} = (\text{C.P.}) - (\text{S.P.})$
3. Loss or gain is always reckoned on C.P.
4. Gain Percentage: (Gain %)
$$\text{Gain \%} = \left(\frac{\text{Gain} \times 100}{\text{C.P.}} \right)$$
5. Loss Percentage: (Loss %)
$$\text{Loss \%} = \left(\frac{\text{Loss} \times 100}{\text{C.P.}} \right)$$
6. Selling Price: (S.P.)
$$\text{SP} = \left[\frac{(100 + \text{Gain \%})}{100} \times \text{C.P.} \right]$$
7. Selling Price: (S.P.)
$$\text{SP} = \left[\frac{(100 - \text{Loss \%})}{100} \times \text{C.P.} \right]$$
8. Cost Price: (C.P.)
$$\text{C.P.} = \left[\frac{100}{(100 + \text{Gain \%})} \times \text{S.P.} \right]$$
9. Cost Price: (C.P.)
$$\text{C.P.} = \left[\frac{100}{(100 - \text{Loss \%})} \times \text{S.P.} \right]$$
10. If an article is sold at a gain of say 35%, then S.P. = 135% of C.P.
11. If an article is sold at a loss of say, 35% then S.P. = 65% of C.P.
12. When a person sells two similar items, one at a gain of say $x\%$, and the other at a loss of $x\%$, then the seller always incurs a loss given by:
$$\text{Loss \%} = \left(\frac{\text{Common Loss and Gain \%}}{2} \right)^2 = \left(\frac{x}{2} \right)^2.$$

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13.If a trader professes to sell his goods at cost price, but uses false weights, then

$$\text{Gain \%} = \left[\frac{\text{Error}}{(\text{True Value}) - (\text{Error})} \times 100 \right] \%.$$