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 prices, 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. Gain = (S.P.) - (C.P.)

2. Loss = (C.P.) - (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.)
   \[\text{SP} = \left( \frac{100 + \text{Gain} \%}{100} \right) \times \text{C.P.}\]

7. Selling Price: (S.P.)
   \[\text{SP} = \left( \frac{100 - \text{Loss} \%}{100} \right) \times \text{C.P.}\]

8. Cost Price: (C.P.)
   \[\text{C.P.} = \left( \frac{100}{100 + \text{Gain} \%} \right) \times \text{S.P.}\]

9. Cost Price: (C.P.)
   \[\text{C.P.} = \left( \frac{100}{100 - \text{Loss} \%} \right) \times \text{S.P.}\]

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:
   \[\text{Loss} \% = \left( \frac{\text{Common Loss and Gain} \%}{2} \right) = \left( \frac{x}{2} \right)^2.\]
13. If a trader professes to sell his goods at cost price, but uses false weights, then

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