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Comparing Quantites

Cost price:- The price at which a shopkeeper buys an item, is called its cost price (C.P.)

Selling price (S.P.):- The price at which the shopkeeper sells the item is called selling price (S.P.)

Loss:- The Selling price is less than the cost price. the shopkeeper incurs a loss.

Loss = cost price - Selling price.

Profit:- The selling price is more than the cost price, the shopkeeper incurs profit.

Profit = Selling price - cost price.

Some important formulas:-

When S.P. > C.P.

Gain or profit = S.P. - C.P.

$$\text{Gain \%} = \frac{\text{Gain}}{\text{C.P.}} \times 100$$

S.P. = C.P. + Gain.

C.P. = S.P. − Gain

$$S.P. = \frac{C.P. \times (100 + Gain\%)}{100}$$

$$C.P. = \frac{100 \times S.P.}{(100 + Gain\%)}$$

2. When C.P. > S.P.

Loss = C.P. − S.P.

C.P. = S.P. + Loss

S.P. = C.P. − Loss

$$Loss\% = \frac{Loss}{C.P.} \times 100$$

$$S.P. = \frac{(100 - Loss\%) \times C.P.}{100}$$

$$C.P. = \frac{S.P. \times 100}{(100 - Loss\%)}$$

Ex 1. If a book costing ₹ 75 is sold for ₹ 80. find Loss or Gain %.

Soln C.P. = ₹ 75, S.P. = ₹ 80.

S.P. > C.P.

Gain = S.P. − C.P.

= ₹ 80 − ₹ 75

= ₹ 5

$$Gain\% = \frac{Gain \times 100}{C.P.} = \frac{₹5 \times 100}{₹75_{15\ 3}} = \frac{20}{3}\% = 6\frac{2}{3}\%$$