PROFIT & LOSS

Profit Loss

Cost Price (C.P.) : Buying price of any item
Selling price (S.P.) : Price at which you sell

Gain % ; Profit% always calculated on C.P.

If C.P. < S. P.
gain = S.P. - C.P.

$$\text{gain\%} = \frac{S.P.\&C.P.}{C.P.}\%100 = \frac{gain}{C.P.}\%100$$

eg : A toy bought for Rs. 72
Sold for Rs. 80
Since S.P. > C.P.
gain = Rs.80 - Rs.72 = Rs. 8

$$\text{gain\%} = \frac{8}{72}\%100 = \frac{100}{9}\% = 11\frac{1}{9}\%$$

If C.P. > S.P
loss = C.P. - S.P

$$\text{loss\%} = \frac{C.P.\&S.P.}{C.P.} = \frac{loss}{C.P.}\%100$$

eg : Cost . Price of T.V. = Rs. 12500
S.P. of T.V. = Rs 12000
Since C.P. > S.P.
loss = Rs. 12500 - Rs.12000 = Rs.500

$$\text{loss\%} = \frac{Rs.\ 500}{Rs.\ 25000}\%100 = 4\%$$

Gain% Given

$$S.P. = \frac{C.P.\%(100 \forall gain\%)}{100}$$

$$C.P. = \frac{S.P.\%100}{(100 \forall gain)}$$

eg : C.P. = Rs. 540
gain % = 10%

$$S.P. = \frac{Rs.\ 540\%(100 \forall 10)}{100}$$
$$= Rs.\frac{540\%110}{100} = Rs.594$$

S.P. = Rs 4025
gain% = 15

$$C.P. = \frac{Rs.4025\%100}{100 \forall 15}$$
$$= Rs.\frac{4025\%100}{115}$$
$$= Rs.3500$$

Also S.P. = C.P. + gain
C.P = S.P. - gain

If C.P. = Rs. 72
gain = Rs. 8
S.P. = Rs. 72 + 8 = Rs. 80

If S.P. = Rs 80
gain = Rs. 8
C.P. = Rs.80 - Rs. 8 = Rs. 72

eg : S.P. of 10 pens = C.P. of 12 pens
C.P. of one pen = Rs. 1
C.P. of 12 pens = Rs.12
S.P. of 10 pens = Rs. 12
C.P. of 10 pens = Rs. 10
S.P. of 10 Pens > C.P. of 10 pens
gain - Rs. 12 - Rs.10 = Rs. 2 (on 10 pens)

$$\text{gain\%} = \frac{2}{10}\%100 = 20\%$$

Loss% Given

$$S.P. = \frac{C.P.\%(100 \&loss\%)}{100}$$

$$C.P. = \frac{S.P.\%100}{(100 \&loss\%)}$$

eg . C.P. of a cooler
= Rs. 6200
loss% = 15%

$$S.P. \quad Rs.\frac{6200\%(100 \&15)}{100}$$
$$Rs.\frac{6200\%85}{100} = Rs.\ 5270$$

S.P. of a washing machine
= Rs.13500
loss % = 20%

$$C.P. = \frac{Rs.13500\%100}{100 \&20}$$
$$Rs.\frac{13500\%100}{80} = Rs.16875$$

also S.P. = C.P. - loss
C.P. = S.P. + loss

If C.P. = Rs. 12500
loss = Rs.500
S.P. = Rs. 12500 - Rs.500
= Rs 12000

If S.P. = Rs.12000
loss = Rs. 500
C.P. = Rs. 12000 + Rs.500
= Rs. 12500