Profit and Loss

Q. Selling goods of $\frac{3}{5}$ th at 10% profit and remaining at 5% loss then net profit is 1500₹ what is CP?

Let CP be x then -

$$\frac{3}{5} \times 0.1 \times CP - \frac{2}{5} \times 0.05 \times CP = 1500$$

$$\boxed{CP = 37500₹}$$

Q. Article sold by A to B at 20% profit, B to C at 25% loss C to D at 40% profit then If D paid 252₹, CP to A

→

CP of Atricle to A = x

to B = $1.2x$

to C = $0.75(1.2x)$

to D = $1.4 \times (0.75(1.2x)) = 252₹$

$$\therefore x = 200₹$$

Q. Absolute difference of selling price when article sold's at 15% loss and 15% profit is 450₹, CP?

→

$$1.15\,CP - 0.85\,CP = 450$$

$$\boxed{CP = 1500}$$

Q. Successive discounts of 20% then 25% gains profit of 20% what will be the profit percentage if discount is 25%?

→

$SP_1 = 0.8 \times 0.75 \times MP$

$1.2\,CP = SP$

$\therefore CP = 0.5\,MP$

$SP_2 = 0.75\,MP$

$\%\ profit_2 = \frac{SP_2 - CP}{CP} \times 100$

$\%\ profit_2 = \frac{0.75\,MP - 0.5\,MP}{0.5\,MP} \times 100 = 50\%$

OR

Net discount = $20 - 25 + \frac{20 \times 25}{100} = 50\%$

$1.2\,CP = 0.5\,MP$

$SP = 0.75\,MP$ at 25% dis

$$\therefore \%\ profit = 50\%$$

Date:

Q. If SP is five time discount and % discount is equal to % profit find ratio of discount to CP.

→ $5d = SP$

$MP = SP + d = 6d$

$\%\, d = \%\, P$

$\frac{d}{MP} \times 100 = \frac{5d - CP}{CP} \times 100$

$\therefore \boxed{\frac{d}{CP} = \frac{7}{30}}$

Q. MP is 40% of CP if 28.57% discount is given the again 12.5% of CP is given as discount then what is loss?

→ Let $CP = 100$ ₹

$MP = 140$ ₹

$SP = MP - d = 140 - \frac{2}{7} \times 140 = 100$ ₹

as Now SP = CP any further discount is loss%

hence $\boxed{\text{loss} = 12.5\%}$

Q. If article sold at 10% loss if it sold at 108 ₹ more their is 10% profit then what is the CP?

→ $0.9\, CP + 108 = 1.1\, CP$

$\boxed{CP = 540}$ ₹

Q. CP of 12 mango is SP of 9 and discount on 10 is profit on 5 What is percentage point difference between profit and discount percentages?

→ $9CP = 12SP$

$\frac{SP}{CP} = \frac{12}{9}$

%p = 33.33 for 9 mangoes

%p = 3.703 for 1 mango

%p = 18.51 for 5 mangoes

%d = 18.51 for 10 mangoes

%d = 1.851 for 1 mango

∴ ~~unit~~ percentage point difference 3.703 − 1.851
= 1.85%.

Q. MP price 20% more and giving 10% discount also false weight of 900 gm for 1kg what is net profit

→

Profit 1 = 20%.

Loss 1 = 10%. after getting profit on that SP is considering as CP. for next.

$$\text{Profit 2} = \frac{\text{false} - \text{true}}{\text{false}} \times 100 = 11.11\%$$

$$\therefore \%\text{ net profit 1} = 20 - 10 - \frac{20 \times 10}{100} = 8\%$$

$$\therefore \%\text{ net profit} = 8 + 11.11 + \frac{8 \times 11.11}{100} \approx 20\%.$$

Ans = 20%.

Q. MP is 30% of CP $\frac{1}{4}$th of good sold at 15% discount half at MP and remaining at 30% discount find gain

→ $\frac{1}{4}$th means take 4 parts of 100 each

30% marks up price gives total 130 − 130 − 130 − 130

one part sold at 15% discount one at 30% discount

i.e. 0.85 × 130 + 0.70 × 130 ≈ 200

two part at MP hence 130 + 130 = 260

total SP = 460

total CP = 400

Page No.:
Date:

$$\% \text{ Profit} = \frac{60 \times 100}{400} = 15\%$$

Q. J sells laptop to K at 20% ~~profit~~ loss J to M at 25% profit M returns it to K but losses (only gain 4.5 for) back find M's loss. if J has CP of 175007

→ $$\% \text{ net profit} = -20 + 25 - \frac{20 \times 25}{100} = 0\%$$

hence K sold to M at 175007

Now M has 10% loss hence loss is 17507

Q After two successive discounts of 10% and r% one pay 1224 for MP of 1600 what is r%?

→ $$1224 = \frac{(100-10)}{100} \times \frac{(100-r)}{100} \times 1600$$

$$r = 15\%$$

Q. with profit of k% and cheating with 880 gram for 1kg one gain 25% profit what is k?

→ with cheating profit = $\frac{1000-880}{880} \times 100 = 15\%$

profit is K%.

$$\text{Net Profit} = \text{Profit1} + \text{Profit2} + \frac{\text{Profit1} \times \text{profit2}}{100}$$

$$25\% = 15\% + K\% + \frac{15K}{100}$$

$$K = 10\%$$

Q. If Article sold at 8% profit instead of 8% loss he get 12 extra find CP.

→ $$1.08\,CP - 0.92\,CP = 12$$

$$CP = 75$$

Q. CP of 20 books is same as SP of 'X' books, If profit is 25% then value of 'X' is?

→

$$SP \times X = CP \times 20$$

$$\frac{SP-CP}{CP} \times 100 = \frac{20-X}{X} \times 100$$

$$25 = \frac{20-X}{X} \times 100$$

$$\boxed{X = 16\%}$$

Q. Man sells book at 5% profit, if he had bought it at 5% less and sold it for ₹1 he would have gained 10%. The cost price of book is

→ Let CP

$1.05 \times CP = SP$

$1.1 \times (0.95CP) = SP - 1$

$1.1 \times (0.95CP) = 1.05CP - 1$

$\boxed{CP = 200\ ₹}$

Q. A sold an ipod for ₹ 17940 with discount of 8% and gained 19.6%. If no discount is allowed, then what will be gain

→

$$\frac{8}{100} = \frac{MP - 17940}{17940} \quad \text{or} \quad 0.92\,MP = SP$$

$\boxed{MP = 19500\ ₹}$

$$\frac{19.6}{100} = \frac{SP-CP}{CP} \quad \text{or} \quad 1.196\,CP = SP$$

$\boxed{CP = 15000}$

<u>without discount MP=SP</u>

$$\%\ \text{profit} = \frac{MP-CP}{CP} = \frac{SP-CP}{CP} = \frac{19500-15000}{15000} = 30\%$$

$\boxed{\%\ \text{profit } 30\%}$

Q. Trader wants 10% profit, also expenses are 15% of sales, what should his rate of mark up to be on an article of ₹ 9?

→ Let SP = X, CP = 9

SP should be

$X = 0.10X + 0.15X + 9$ ---{Profit is 0.10 of SP Given

$X = 12$

Markup % = $\frac{3}{9} \times 100 = 33.333\%$

Q. Selling pencil at 5% loss, book at 15% gain earn ₹7
If pencil at 5% gain, book at 10% gain earn ₹18
what are the actual price of book?

→

$-0.95\,CP_1 + 1.15\,CP_2 = 7$ | $(X + 0.15X) + (Y + 0.05Y) = 9 + X + Y$

$1.05\,CP_1 + 1.10\,CP_2 = 18$ | $(X + 0.1X) + (Y + 0.05Y) = 13 + X + Y$

$CP_1 = 80$
$CP_2 = 100$

$X = 80$
$Y = 100$

Q. By selling 33 m of wire, a shopekeeper gain the price 11 m of wire. His gain per cent is -

→