Profit & loss

Selling Price = Cost price + Profit

$$\text{Profit \%} = \frac{\text{Profit}}{CP} \times 100 \qquad \text{loss \%} = \frac{\text{loss}}{CP} \times 100$$

Cost Price of book = 500 we need to sell with 10% Profit so

$$SP = (100 + 10\%) \times CP$$

$$SP = 110\% \times CP$$

$$SP = \frac{500 \times 110}{100} = 550$$

$$SP = (100 - \text{loss}) \times CP$$

$$100 - 10\% \times CP$$

$$\frac{500 \times 99}{100} = 450$$

1) Ajay incurred a loss of 20% by selling a vase for Rs. 2880. To get a Profit of 20% what was Rice of vase.

$$2880 = (100 - 20)\% \times CP$$

$$2880 = 80\% \times CP$$

$$\frac{2880 \times 100}{80} = CP$$

$$= (100 + 20)\% \times CP$$

$$\frac{2800 \times 100}{80} \times \frac{120}{100}$$

RS 4320

2.) Pambabu Sells paper Planes at the rate of 20 Planes Re. 1 if he gets Profit of 20%, how many Planes did Pambabu

$1 = (100+20\%)\ CP$

$1 = 120\%\ CP \Rightarrow CP = \frac{100}{120}$ — ①

20	=	100	120	= ? = 20 × 1 = 100/120
?	=	1		

? = 24 Plans

A.)

3.) Uma wants to gain 15% of Profit on her Sale of sugar. She buys 120 kg at Rs 24 Per kg to mix with 180 kg of sugar bought at Rs. 28 /kg. She sells at

$SP = (100 + \text{Profit}\%)\ CP$

$\frac{115}{100} \times CP$

She bought to 2

120 kg = 120 × 24 = 2880 Rs

180 Kg = 180 × 28 = 5040

7920 Rs

$SP = \frac{115}{100} \times 7920 = 9108$ Z

4) Guddi buys some oranges in a shop at 4/Rs she goes to another shop and buys same number of orange at 5 per rupee. She then combines them in a basket and sells them at 4 per / Re will she get Profit or loss and how much

SP - CP = + - Profit
SP - CP - - = loss

1st - 4 orange / 1 Rs. $\frac{1}{4}$

2nd - 5 orange / 1 Rs = $\frac{1}{5}$

so she add both

$2 = \frac{1}{4} + \frac{1}{5} = \frac{9}{20}$ $\quad CP = \frac{9}{40}$

$SP = \frac{1}{4} - \frac{9}{40} = \frac{1}{40}$

$\% P = \frac{1/40}{9/40} \times 100 = \frac{100}{9}\% = 11\frac{1}{9}\%$

5) Ramesh gets a Profit of 20% in one trade & suffers a loss of 20% in the second, when he sells 2 cycles for 4000 each. what is his Profit or loss,

If he has Same Profit & loss sells at Same Price he is gonna face loss

SP = same - 4000 ₹

So $\frac{(20)^1}{100}$ loss % = 4%.

6.) Simran bought pet food worth Rs 56000. She then sold 1/3rd of it incurring a loss of 40%. what Profit she must earn on rest of supplies to nullify loss

1	2	3
-40	20	20

1st divide loss according to required term & nullify em

7.) A Sold a Car to B at a Profit of 25%. B incurred a loss of 15% while selling the same Car to C. A spent Rs. 50000 for this Car. At what price did C buy it

$SP_A = (100+20)\%$ CP $\qquad SP_B = 85\%$ CP_B

$\frac{120}{100} \times 50,000 = 625000 \qquad \frac{85}{100} \times 62500$

Rs - 53,125

8.) A cheater manipulated his weighing machine so that it shows 1 Kg for 970 grams. How much profit does he get

1kg → 970 30gms profit

$\%Pr = \frac{30}{970} \times 100 = \frac{39}{97}\%$

9) Rohit got Profit of 11% by selling his old car. However he realized that he sold his for Rs8100 his Profit would be 38.5%. At what Price did he buy the car

11.5 % 38.5%

% = P / CP × 100 38.5% − 11.5% = 27%

27% · CP = 100

$\frac{27}{100} \times CP = 8100 = 30,000$ ₹

10) Chaman sells 40 fans at 10% profit. He wants a total of 20% Profit on entire sale. Since he got 160 fans at a rate of Rs 100 each, at what Profit he must sell

Total Profit = Profit in 40 + Profit in 120

Profit in 40 fans:

$\% P = \frac{P_v}{CP} \times 100$

$10 = \frac{P_v}{40 \times 100} \times 100$ $P_v = 400$ Rs

Total profit

$20 = \frac{P_v}{160 \times 100} \times 100$

$P_{v\,total} = 3200$ Rs

120 :

$$A\% = \frac{P_r R_s}{120 \times 100} \times 100$$

$$P_r R_s = 120 \times A$$

$$3200 = 400 + (120 \times A)$$

$$A = \frac{2800}{120} = 23.33\%.$$

11.) Suman buys 160 chocolate for Rs 480. She wants to earn 30% Profit by selling them. But Rakesh visited her and she gave him 25% of those chocolate at cost Price itself. But even after doing this she earned Profit of 30%, as decided. for how much did she sell each chocolate.

$$CP = 480 Rs - 160 = 480 Rs = \frac{480}{160} = 3 Rs$$

$$\frac{75}{100} \times 160 = 120 C$$

$$30\% = \frac{P_r R_s}{480} \times 100$$

$$P_r R_s = 144$$

There are only 120 remaining

120 C	144
1 C	?

$$\frac{144}{120} = 1.2 Rs$$

Total

$$SP = CP + P_r = 3 + 1.2$$

$$Rs = 4.2$$

12. Ramesh sold a statue for a price 25% higher than original price of the statue. He bought at 20% discount on original price with the profit of Rs 2025, find original price

80% of P — S — 125% of P

C.P

P = 125 − 80 = 45%.

2020 = 45% of P

P = 4500 Rs

13. A shopkeeper earns a profit of 15% after selling a book at 20% discount on the printed price. The ratio of cost price & printed price of book

SP = (100 + 15)% of CP

SP = 115/100 × CP — (1)

SP = (100 − 20)% of CP

SP = 80% × CP / 100 — (2)

CP/SP = 80/115 = 16:23

14. The ratio of cost price and selling price is 4:5. The profit percent is

CP : SP = 4 : 5

Pr = SP − CP = 1

% 1/4 × 100 = 25%.

15.) If selling Price of 10 articles is equal to cost price of 50 articles, The loss or Gain is?

lets assume

CP 50a = 100

a = 2

SP 40a = 100 a = 2.5

Profit = SP - CP = 2.5 - 2 = 0.5

%P = $\frac{P}{CP} \times 100 = \frac{0.5}{2} \times 100 = 25\%$.

16.) A fruit seller buys lemons at 2 for a rupee and sells them 5 for 3 rupees. His gain percent is?

2 lemons → Re 1

2×100 = 200 lemons (P be - 100

5	3
200	?

$? = \frac{200 \times 3}{5} = 120$ Rs

120 - 100 = 20

$\frac{20}{100} \times 100 = 20\%$ Profit