

1. If cost of 15 eggs be 75 rupees, then find out the cost of 5 dozen eggs.

- a. 300 b. 400
c. 500 d. 600

Solution: CP of 15 eggs is 75

CP of 5 dozen (60 eggs) will be: $75 \times 60/15 = 300$

2. A man bought 18 oranges for a rupee and sold them at 12 oranges for a rupee. what is the profit percentage?

- a. 33.33 % b. 50 %
c. 66.66 % d. None of these

Solution: To find out Profit or Loss %, we must take equal number of items while purchasing and selling both. So, let's take number of oranges he bought is 36 (LCM of 12 and 18).

CP of 36 oranges = Rs.2

SP of 36 oranges = Rs.3

Profit % = $\frac{1}{2} \times 100 = 50\%$

Alternate Solution:

From question, $CP/SP = 12/18 = 2/3$. This means if CP is $2x$ SP will be $3x$. Hence, profit is Rs. x ($3x-2x$).

\therefore Profit (%) = $x / 2x \times 100 = 50\%$

3. On selling an article for Rs. 240, a trader loses 4%. In order to gain 10% he must sell that article for

- a. Rs. 275 b. Rs. 340
c. Rs. 320 d. Rs. 264

Solution: $CP = SP/MF$ i.e. $240/0.96 = 250$.

So to gain 10% on Rs. 250, he must sell it for Rs. 275 ($250+25$).

Alternate Solution:

Let the CP be Rs. x , then SP be $0.96x$

$\therefore 0.96x = 240$

$\Rightarrow x = 250$

Now the new SP = $250 \times 1.1 = 275$

4. By selling 12 apples for a rupee, a man loses 20%. How many for a rupee should he sell to gain 20%?

- a. 8 b. 10
c. 15 d. 16

Solution: 12 apples for Rs.1, a man loses 20%. So CP of 12 apples = $1/0.8 = Rs.1.25$. Now, on CP of Rs.1.25, a man needs 20% profit, he should sell 12 apples for Rs.1.5 or 8 apples for Rs.1

5. 6% more is gained by selling a coat for Rs.1425 than by selling it for Rs. 1353. The cost price of the coat is?

- a. Rs. 1000 b. Rs. 1250
c. Rs. 1500 d. Rs. 1200

Solution: Diff of 72 ($1425-1353$) is equivalent to 6% of cost price of coat. So, 100% of CP = $(72 \times 100)/6 = 1200$.

6. An item costing Rs.200 is being sold at 10% loss. If the price is further reduces by 5%, the selling price will be?

- a. Rs. 170 b. Rs. 171
c. Rs. 180 d. Rs. 181

Solution: If CP of Rs.200 is sold at 10% loss, SP will be $200 - 20 = 180$. Now, the price is further reduced by 5% of 180, hence new price $180 - 9$ (5% of 180) = Rs. 171.

Alternate thought:

Selling price after 10% loss = $200 - 10\% = 180$

Selling price after additional 5% loss = $180 - 5\% = 171$

7. Arun bought toffees at 6 for a rupee. How many for a rupee he should sell to gain 20% ?

- a. 3 b. 4
c. 5 d. can't be determined

Solution: 6 toffees can be sold at Rs. 1.2 to gain 20% profit. So, SP of 1 toffee is $1.2/6$ i.e. Rs. 0.2. Hence, 5 toffees must be sold for a rupee by this logic!

Alternatively:

$CP = 100 / 6$

$SP = (100 / 6) \times 1.2 = 100 / 5$

Hence, he should sell 5 toffees for Re. 1 (100 paisa)

8. The CP of 19 articles is same as the selling price of 29 articles. what is the loss % ?

- a. 35 % b. 34.48 %
c. 52.63 % d. none of these

Solution: CP of C articles = SP of S articles. Then Profit or Loss % = $[(C - S)/S] \times 100$

So, $(19-29/29) \times 100 = 10/29 \times 100 = 34.48\%$

9. ITC sells one product at a profit of 20% another at a loss of 20% at the same selling price. what is the loss incurred by ITC?

- a. 1 % b. 2 %
c. 4 % d. 0 %

Solution: When articles are sold at same selling price, then Loss% = $20^2 / 100$ i.e. 4%

10. At the petrol pump the operator gives 5% less petrol but he sells it at the cost price. What is his profit in this way?

- a. 5% b. 5.6%
c. 5.26% d. 4.78%

Solution: Let's say CP of 1 ltr Petrol is Rs. 1. CP of 100 ltrs is Rs.100, but he is giving only 95 ltrs i.e. Rs. 95 CP but getting Rs. 100 from customer over every Rs.95.

So he is selling 95 liters in Rs. 100.

Profit % = $5/95 = 1/19$ or 5.25%.

Quick Thought

He sells 95 litre petrol at the price of 100 litre.

So profit % = $[5 / 95] \times 100 = 5.26\%$

11. A trader sells two articles, one at a loss of 10% and another at a profit of 15% but finally there is no loss or gain. If the total sale price of these two articles is Rs. 30,000, find the difference between their cost price:

- a. Rs.5000 b. Rs.6000
c. Rs.7500 d. none of these

Solution: There is no profit or loss in the transaction. So total CP = Total SP.

This also means loss on one article is equal to profit on other article. If CP of article with profit is Rs. x and with loss is Rs. y,

$$0.15x = 0.1y \text{ or } x/y = 2/3 \text{ or } 2:3$$

$$\text{Also, } x + y = 30000$$

$$\text{So, } x = 2/5 * 30000 = 12000 \text{ and } y = 3/5 * 30000 = 18000.$$

Diff is Rs.6000.

12. A trader sells 20 kg of sugar at Rs. 400. A customer asks 20% discount and he agrees to it but instead of 1 kg he gives 4% less sugar. what is the effective discount that the customer gets?

- a. 16 % b. 16.66 %
c. 15.5 % d. 19.6 %

Solution: Trader was selling 20kg for Rs.400 i.e. Rs.20/- per kg. Now giving 20% disc on Rs.400. So, now he would sell for Rs.320. But in this case, he is actually giving 19.2kg (4% less than 20kg sugar). Initially 19.2kg cost $19.2 * 20 =$ Rs.384, now Rs.320.

$$\text{Discount \%} = 64/392 * 100 = 16.66\%$$

13. A trader mixes 25% kerosene to his petrol and then he sells the whole mixture at the price of petrol. if the cost price of kerosene be 50 % of the cost price of petrol, what is the net profit percentage ?

- a. 11 1/9% b. 12 1/9%
c. 9 1/11% d. 20%

Solution: CP of petrol be Rs.2x, CP of Kerosene would be Rs.x.

He mixes 0.25gm of kerosene with every 1gm of petrol and sells this 1.25gm for Rs. 2x.

$$\text{Total CP} = 0.25 * x + 1 * 2x = 2.25x$$

$$\text{Total SP} = 1.25 * 2x = 2.50x.$$

$$\text{Profit \%} = (0.25x/2.25x) * 100 = 11 1/9\%$$

14. A trader procures his goods from a wholesaler, whose balance reads 1200 gm for 1000 gm. The trader sells all the procured goods to a customer after marking up the goods at 20% above the cost price. what is his overall percentage profit or loss in the whole transaction?

- a. 38 % profit b. 50 % profit
c. no profit no loss d. none of the above

Solution: Suppose trader bought the goods from wholesaler at the rate of Rs.1/- per kg. He pays Rs.1200 for 1000gms (due to faulty weight). Now, he will sell these 1000gms to customer for Rs.1200 (20% above CP of 1000gms). So, he bought 1000gms for Rs. 1200 and sold for Rs.1200 only enabling no profit, no loss.

15. The cost of 2 tables is equal to the cost of 5 chairs. If the difference of the cost of one table and one chair is Rs. 1200, then the cost of one chair is?

- a. Rs. 500 b. Rs. 400
c. Rs. 800 d. Rs. 600

Solution: Let the CP of a table is Rs. t and a chair Rs. c

$$2t = 5c \text{ or } t/c = 5/2 \text{ i.e. } 5:2$$

So, if CP of table is 5x, chair will be 2x.

$$\text{Given } 5x - 2x = 1200. x = \text{Rs.}400.$$

$$\text{Cost of a chair is } 2x = 2 * 400 = \text{Rs.}800.$$

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