

PG-DAC FEB 25 APTITUDE QUESTION BANK

Topic: Profit & Loss , Percentage

If an article is sold at a loss of 25%, and the selling price is ₹450, find the cost price.

- a) ₹500
- b) ₹550
- c) ₹600
- d) ₹650

$$\begin{aligned} SP \times \frac{25}{100} &= 150 \\ SP - 150 &= 450 \\ SP &= 600 \end{aligned}$$

A person bought an item for ₹1200 and sold it for ₹1440. What is the profit percentage?

- a) 10%
- b) 15%
- c) 20%
- d) 25%

$$\begin{aligned} CP &= 1200 \\ SP &= 1440 \\ \frac{240}{1200} \times 100\% &= 20\% \end{aligned}$$

If the selling price of an item is ₹960 and the cost price is ₹800, what is the profit percentage?

- a) 15%
- b) 20%
- c) 25%
- d) 30%

$$\begin{aligned} SP &= 960 \\ CP &= 800 \\ \frac{960 - 800}{800} \times 100\% &= 20\% \end{aligned}$$

A shopkeeper sells a fan at ₹1200 with a loss of 20%. Find the cost price.

- a) ₹1400
- b) ₹1500
- c) ₹1600
- d) ₹1700

$$\begin{aligned} SP &= 1200 \\ CP &=? \\ CP &= \frac{SP \times 100}{(100 - 20)} \\ &= \frac{1200 \times 100}{80} \\ &= 1500 \end{aligned}$$

If the cost price of an article is ₹400 and it is sold for ₹480, what is the profit percentage?

- a) 15%
- b) 20%
- c) 25%
- d) 30%

$$\begin{aligned} CP &= 400 \\ SP &= 480 \\ \frac{480}{400} \times 100\% &= 20\% \end{aligned}$$

A trader gives two successive discounts of 20% and 10%. Find the net discount percentage.

- a) 28%
- b) 30%
- c) 32%
- d) 36%

$$\begin{aligned} n &= 100 - 20\% = 80\% \\ &= 80 - 10\% = 72\% \\ &100 - 72 = 28\% \end{aligned}$$

A man sold a shirt for ₹800 after giving a 20% discount. Find the marked price.

- a) ₹900
- b) ₹1000
- c) ₹1100
- d) ₹1200

$$SP = 800 - 20\%$$

$$\cancel{900} \times 20\% = 180$$
$$100\% \times SP = 800 \Rightarrow \cancel{\cancel{1000}}$$

A watch is sold for ₹1800 with a 25% profit. Find the cost price.

- a) ₹1200
- b) ₹1300
- c) ₹1400
- d) ₹1500

$$SP = 1800 + 25\% = 360 + 90 = 450$$

$$1800 \times 25\% = 450$$
$$\cancel{\cancel{1500}}$$

$$\cancel{\cancel{1400}}$$

A shopkeeper marks an article at ₹1500 and allows a 10% discount. Find the selling price.

- a) ₹1300
- b) ₹1350
- c) ₹1400
- d) ₹1450

$$\begin{aligned} CP &= 1500 - 10\% = 150 \\ &= \cancel{\text{₹}} \cancel{1500} \end{aligned}$$

A merchant buys 10 pens for ₹150 and sells them for ₹200. What is his profit percentage?

- a) 25%
- b) 30%
- c) 33.33%
- d) 40%

$$\begin{aligned} CP &= 150 \\ SP &= 200 \\ \frac{50}{150} \times 100 &= 33.33\% \\ &= \cancel{33.33\%} \end{aligned}$$

A trader gives a 15% discount on an item and still makes a profit of 20%. What is the markup percentage?

- a) 30%
- b) 35%
- c) 40%
- d) 45%

$$x = 100 \downarrow 15\% = 15 \\ = 85$$

$$85 \times 20\% = 17 \\ 102$$

$$\cancel{4X} \\ \cancel{102}$$

$$\cancel{X100} \\ 40\%$$

A table is sold for ₹2250 at a 10% profit. What is the cost price?

- a) ₹1800
- b) ₹1900
- c) ₹2000
- d) ₹2100

$$\begin{array}{r} 2100 \\ \cancel{210\%} \\ \hline 2000 \end{array}$$

? $\frac{2000}{200\%} = 2200$

is 2000 correct

If a shopkeeper wants a profit of 25% on an item that costs ₹800, what should be the selling price?

- a) ₹900
- b) ₹1000
- c) ₹1050
- d) ₹1100

$$\begin{aligned} CP = 800 + 25\% \times 200 \\ = 1000 \end{aligned}$$

A refrigerator is sold for ₹15,000 at a loss of 10%. Find the cost price.

- a) ₹16,500
- b) ₹17,000
- c) ₹16,000
- d) ₹16,800

$$\begin{aligned} 15000 \times 10\% &= 1500 \\ 15000 - 1500 &= 13500 \\ 16800 & \cancel{16800} \end{aligned}$$

An article is marked 50% above the cost price and then sold at a discount of 20%. What is the profit percentage?

- a) 20%
- b) 25%
- c) 30%
- d) 35%

$$\begin{aligned} CP &= 100 + 50\% = 150 \\ SP &= 150 - 20\% = 120 \\ \text{Profit} &= 20\% \end{aligned}$$

A dealer makes a profit of 12% after allowing a 5% discount. Find the marked price of an article whose cost price is ₹400.

- a) ₹500
- b) ₹510
- c) ₹520
- d) ₹530

$$\begin{aligned} CP &= 400 + 12\% = 448 \\ SP &= 448 + 5\% = 470 \end{aligned}$$



A book is bought for ₹480 and sold for ₹576. What is the profit percentage?

- a) 15%
- b) 18%
- c) 20%
- d) 25%

$$\begin{aligned} CP &= 480 \\ SP &= 576 \\ \frac{576 - 480}{480} \times 100\% &= 20\% \end{aligned}$$

If a profit of ₹50 is made on an article whose cost price is ₹500, what is the profit percentage?

- a) 8%
- b) 9%
- c) 10%
- d) 12%

$$\begin{aligned} CP &= 500 \\ SP &= 550 \\ \frac{550 - 500}{500} \times 100\% &= 10\% \end{aligned}$$

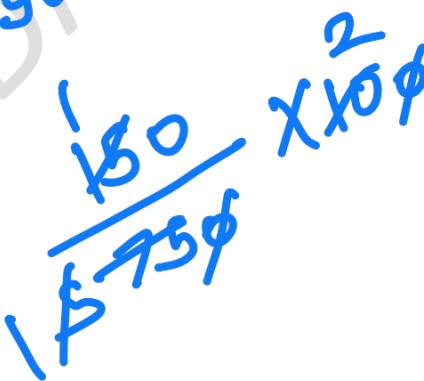
A shopkeeper sells a cycle at a 15% profit and the selling price is ₹2300. Find the cost price.

- a) ₹1900
- b) ₹2000
- c) ₹2100
- d) ₹2200

$$\begin{array}{l} \text{2000} \xrightarrow{\text{15}\%} +300 \\ \text{2300} \\ \hline \end{array}$$


The cost price of an article is ₹750 and it is sold at ₹900. What is the gain percentage?

- a) 15%
- b) 18%
- c) 20%
- d) 25%

$$\begin{array}{l} CP = 750 \\ SP = 900 \\ \hline \end{array}$$


A man sells an item at 20% loss. If the selling price is ₹640, find the cost price.

- a) ₹700
- b) ₹750
- c) ₹800
- d) ₹850

$$\begin{array}{l} SP = 640 \\ \text{---} \\ \begin{array}{r} 800 \\ - 160 \\ \hline 640 \end{array} \\ \downarrow 20\% \end{array}$$

A trader sells a mobile phone for ₹9600 at a profit of 20%. Find the cost price.

- a) ₹7500
- b) ₹8000
- c) ₹8200
- d) ₹8500

$$\begin{array}{l} SP = 9600 \\ \text{---} \\ \begin{array}{r} 8000 + 1600 = 1600 \\ - 1600 \\ \hline 9600 \end{array} \\ \uparrow 20\% \end{array}$$

A shopkeeper sells an item for ₹500 at a 20% profit. What was the cost price?

- a) ₹400
- b) ₹410
- c) ₹420
- d) ₹430

$$\begin{array}{l} SP = 500 \\ \text{Profit} = 20\% \\ CP = ? \\ \text{Profit} = 20\% \text{ of } CP \\ 20\% \text{ of } CP = 500 - CP \\ 0.2 \times CP = 500 - CP \\ 0.2 \times CP + CP = 500 \\ 1.2 \times CP = 500 \\ CP = 500 / 1.2 \\ CP = 416.67 \end{array}$$

A man buys two articles for ₹1500 each. He sells one at a 20% profit and the other at a 10% loss. Find his net profit/loss.

- a) 5% loss
- b) 5% profit
- c) 10% profit
- d) No profit, no loss

$$\begin{array}{l} CP = 1500 \\ CP = 1500 \times 1.2 = 1800 \\ CP = 1500 \times 0.9 = 1350 \\ CP = 1800 + 1350 = 3150 \\ SP = ? \\ SP = 3150 \times 1.05 = 3352.50 \end{array}$$

A trader sells an article at ₹1250 with a loss of 12%. Find the cost price.

- a) ₹1300
- b) ₹1400
- c) ₹1450
- d) ₹1500

$$\begin{array}{r} 1250 \downarrow 12\% = 125 + 25 \\ \hline 150 \\ \hline 1400 \end{array}$$

Find the profit percent earned after selling an article at a doubled rate for half quantity.

- a) 200%
- b) 300%
- c) 400%
- d) 450%

$$\begin{array}{l} CP = x \\ SP = 2x \\ NSP = 2x + \frac{1}{2}x = \frac{5}{2}x \\ NCP = 2x - \frac{1}{2}x = \frac{3}{2}x \\ \frac{\frac{5}{2}x - \frac{3}{2}x}{\frac{3}{2}x} \times 100 \\ \hline 2/2 \\ 2/2 \\ 2/2 \\ 2/2 \\ 2 = 100\% \end{array}$$

A number is multiplied by 20% of itself, the sum is then doubled. If the final value is 490, find the number.

- a) 35
- b) 40
- c) 45
- d) 50

$$AD \times 20\% = 8$$

*so the answer
will be less than
this*

$$\begin{array}{r} 240 \\ + 8 \\ \hline 248 \end{array}$$

35

An article is sold at 20% less than its cost price. If the selling cost is 50 rupees and the selling cost is 5% of the selling price, find the loss. (Selling cost here is the expense occurred to sell the article, it is levied on the seller)

- a) 150 rupees
- b) 200 rupees
- c) 250 rupees
- d) 300 rupees

$$50 = \frac{5}{100} \times SP$$
$$SP = \frac{50 \times 100}{5} = 1000$$
$$SP = CP - \frac{20}{100} \times CP$$
$$1000 = 0.8 \times CP$$
$$CP = 1250$$

$$\begin{aligned} \text{Loss} &= 1250 - 1000 \\ &= 250. \\ &\quad + 50 \\ &\quad \hline \text{₹} 300 \end{aligned}$$

If the seller sells half of his goods at 20% loss and the rest of his goods at 50% profit, find the profit percentage on the entire transaction.

- a) 12% profit
- b) 15% profit
- c) 20% profit
- d) 25% profit

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The profit on selling 1 article is equal to the cost price of 2 such articles. Find the profit percentage.

- a) 100%
- b) 150%
- c) 200%
- d) 225%

$$\begin{aligned} CP &= 100 \\ SP &= 200 + 100 \\ &\cancel{200} \quad \cancel{100} \quad 200\% \end{aligned}$$

The initial price of an article is decreased by 20% but the selling price remains constant. If the initial profit was 500 rupees, find the new profit. It is known the initial profit percent was 20% of cost price

- a) 800 rupees
- b) 900 rupees
- c) 1000 rupees
- d) 1250 rupees

$$\begin{aligned} CP &= \frac{500 \times 100}{20} = 2500 \\ SP &= 2500 + 500 = 3000 \\ \text{New } CP &= 2500 - 500 = 2000 \\ \text{New Profit} &= 3000 - 2000 \\ &\cancel{\$} \quad 1000 \end{aligned}$$

The price of a pair of slippers is decreased by 10% and the selling price is constant. If the initial profit percentage was equal to 25%, find the new profit percentage.

- a) 35%
- b) 38.8%
- c) 40%
- d) 42%

$$\begin{aligned}
 SP &= 1.25 \times CP \\
 NCP &= 0.9 \times CP \\
 N\%P &= 0.95 \times CP \\
 \cancel{N\%P} &= \cancel{0.95} \times 100 \\
 \cancel{N\%P} &= \cancel{0.9} \times 100 \\
 \frac{3.5}{9} \times 100 &= 38.89\%
 \end{aligned}$$

The cost price of an article is doubled, and the selling price is made half. If the initial profit percentage was 500%, find the profit percentage now.

- a) 25%
- b) 50%
- c) 100%
- d) 250%

$$\begin{aligned}
 \cancel{\frac{SP-CP}{CP} \times 100} &= 50 \\
 \cancel{\frac{SP-CP}{CP}} &= 5 \\
 \cancel{SP-CP} &= 5CP \\
 SP &= 6CP \\
 \frac{CP}{2CP} \times 100 &= 50\%
 \end{aligned}$$

A shopkeeper increases the price of sugar by 25%. By how much a family should decrease their consumption to maintain the regular price?

- a) 25% increase
- b) 25% decrease
- c) 20% increase
- d) 20% decrease

$$\begin{aligned} 1 \text{ kg} &= ₹1 \\ 100 \text{ kg} &= ₹100 \leftarrow \\ ₹1.25 \text{ kg} &=? \\ 1.25n &= 100 \\ n &= \frac{100}{1.25} = 80 \\ \cancel{\frac{20}{100} \times 100} &= \cancel{20\%} \\ &\quad \cancel{-20\%} \end{aligned}$$

The profit on selling 15 articles is equal to the cost price of 2 articles. Find the profit percentage.

- a) 11.11%
- b) 12.22%
- c) 13.33%
- d) 14.44%

$$\begin{aligned} 15n &= 2n \\ \cancel{\frac{2n}{15n} \times 100} &= \\ \cancel{\frac{2}{15} \times 100} &= \\ &\quad \cancel{26.67\%} \\ &\quad \cancel{13.33\%} \end{aligned}$$

40% of a number a is 50% of a number b, find the value of a : b.

- a) 2 : 3
- b) 1 : 4
- c) 1 : 5
- d) 3 : 5

$$40\% a = 50\% b$$
$$0.4a = 0.5b$$
$$a = \frac{5}{4}b$$

$$\frac{a}{b} = \frac{5}{4}$$

The marked price of an article is 5 times the discount. Find the selling price in terms of discount.

- a) 2.5 times the discount
- b) 3.5 times the discount
- c) 4 times the discount
- d) 5 times the discount

$$MP = 5D$$
$$SP = MP - D$$
$$SP = (5D) - D$$
$$SP = 4D$$

4 times Discount

Solve for x; x = 20% of 12% of 120% of 6250.

- a) 270
- b) 225
- c) 200
- d) 180

$$6250 \times 120\% = 6250 + 1200 + 50 = 7500$$
$$7500 \times 12\% = 750 + 150 = 900$$
$$900 \times 20\% = 180$$

~~180~~

A shopkeeper purchased an article for 500 rupees. At what price should he mark the article to allow a discount of 35% and still earn 100% profit.

- a) 1539 rupees
- b) 1593 rupees
- c) 1555 rupees
- d) 1599 rupees

$$CP = 500 + 500 \times 65\% \times MP$$
$$MP = \frac{1000}{65} \times \frac{20}{100}$$

~~1539~~ ~~15000~~ ~~1539~~

A is 25% more than b. By what percent is b smaller than a?

- a) 13.33%
- b) 20%
- c) 22%
- d) 30%

$$\begin{aligned}B &= 100 \\A &= 125 \\&\frac{20}{100} \\&\cancel{\frac{100}{125}} \\&\frac{4}{5}\end{aligned}$$

20% / 100%

If the discount is twice the cost price and the marked price is 10000, find the selling price. No profit or loss was made.

- a) 1111.11 rupees
- b) 3333.33 rupees
- c) 5555.55 rupees
- d) 7777.77 rupees

$$\begin{aligned}10000 - 2x &= x \\10000 - 2x &= x \\10000 &= 3x \\3333.33 &= x\end{aligned}$$

₹ 3333.33

The cost price of an article is 30% less than the selling price. The discount is 40% of the selling price. If the marked price is 12600 rupees, find the cost price.

- a) 6300 rupees
- b) 10000 rupees
- c) 8400 rupees
- d) 5600 rupees

$$\begin{aligned} \frac{40}{100}x + 0.4x &= 0.6x \\ x - 0.4x &= 12600 \\ 0.6x &= 12600 \\ x &= \frac{12600}{0.6} = 21000 \\ 21000 &\times 70\% \quad ? \\ 14700 \end{aligned}$$

If 33.33% of a number is 20 more than 16.66% of the number, find 120% of the number.

- a) 121
- b) 139
- c) 144
- d) 169

$$\begin{aligned} \frac{33.33}{100}x &= 16.66x + 20 \\ \frac{33.33}{100}x &= \cancel{16.66x} + 20 \\ \frac{3}{9}x &= \frac{1}{6}x + 20 \\ 6x &= 9x + 180 \\ 3x &= 180 \\ x &= 60 \\ 120\% \times 60 &= 144 \end{aligned}$$

Find the number if, 20% of a number is 20 more than 20% of another number 20.

- a) 100
- b) 110
- c) 120
- d) 125

$$\begin{aligned}x & \text{ is } 20\% \text{ of } y \\ \frac{20}{100}x & = \frac{20}{100}y + 20 \\ 0.2x & = 0.2y + 20 \\ 0.2x - 0.2y & = 20 \\ x - y & = \frac{20}{0.2} \\ x - y & = 100 \\ x & = y + 100 \\ x & = 120\end{aligned}$$

A number if doubled, then tripled and this process is repeated twice. What is the percentage change?

- a) 3500%
- b) 3000%
- c) 2500%
- d) 1750%

$$\begin{aligned}x & \\ 2x & \\ 3 \times 2x & = 6x \\ 2 \times 6x & = 12x \\ 3 \times 12x & = 36x \\ \frac{36x}{2x} \times 100 & \\ 18 \times 100 & \\ 1800\% & \\ 3500\% &\end{aligned}$$

By how much should 234 be reduced to make it 65% of itself?

- a) 80.9
- b) 81.9
- c) 82.9
- d) 83.9

$$\begin{array}{r} 234 \times 65\% = 152 \\ \hline 234 \\ 152 \\ \hline 81 \end{array}$$

81.9

What is 90% of 900% of 9000% of 9?

- a) 7290
- b) 729
- c) 6156
- d) 6561

$$\begin{array}{r} 90\% \times 9 = 81 \\ \hline 100 \\ 81 \\ \hline \end{array}$$
$$\begin{array}{r} 900\% \times 81 = 7290 \\ \hline 1000 \\ 7290 \\ \hline \end{array}$$
$$\begin{array}{r} 9000\% \times 7290 = 6561 \\ \hline 10000 \\ 6561 \\ \hline \end{array}$$

Out of 25 employees of a company, 13 are set off and the salaries of rest of the employees is increased by 24%. Find the total increase or decrease in company's expenditure.

- a) 40.48% decreased
- b) 40.44% increased
- c) 44.48% decreased
- d) 44.84% increased

$$\begin{aligned} & \text{12} \times (1 + 0.24) \\ & \approx 12 \times 1.24 \\ & = 14.88 \\ & \cancel{10} \quad \cancel{100} \\ & \text{---} \\ & \text{40.88} \end{aligned}$$

Zayn bought tickets to concert for Rs. 3500. He wants to sell them at a discount of 15%. What is the discount in Rs.?

- a) Rs.1525
- b) Rs.350
- c) Rs.525
- d) Rs.1050

$$\begin{aligned} & 15\% \times 3500 \\ & = 525 \end{aligned}$$

CDAC MUMBAI