**Nishant Patil**

**PG-DAC**

**Aptitude**

**Assignment 2**

**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

Cost Price (CP) = SP / (1 - Loss%)  
CP = 450 / 0.75 = ₹600  
**Answer: c) ₹600**

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%

Profit % = [(SP - CP) / CP] × 100  
Profit % = [(1440 - 1200) / 1200] × 100 = 20%  
**Answer: c) 20%**

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%

Profit % = [(SP - CP) / CP] × 100  
Profit % = [(960 - 800) / 800] × 100 = 20%  
**Answer: b) 20%**

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

a) ₹1400

b) ₹1500

c) ₹1600

d) ₹1700

Cost Price (CP) = SP / (1 - Loss%)  
CP = 1200 / 0.8 = ₹1500  
**Answer: b) ₹1500**

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%

Profit % = [(SP - CP) / CP] × 100  
Profit % = [(480 - 400) / 400] × 100 = 20%  
**Answer: b) 20%**

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

a) 28%

b) 30%

c) 32%

d) 36%

Net Discount = 20 + 10 - (20 × 10) / 100  
Net Discount = 30 - 2 = 28%  
**Answer: a) 28%**

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

a) ₹900

b) ₹1000

c) ₹1100

d) ₹1200

Marked Price (MP) = SP / (1 - Discount%)  
MP = 800 / 0.8 = ₹1000  
**Answer: b) ₹1000**

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

a) ₹1200

b) ₹1300

c) ₹1400

d) ₹1500

Cost Price (CP) = SP / (1 + Profit%)  
CP = 1800 / 1.25 = ₹1440  
**Answer: c) ₹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

Selling Price (SP) = MP × (1 - Discount%)  
SP = 1500 × 0.9 = ₹1350  
**Answer: b) ₹1350**

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%

Profit % = [(SP - CP) / CP] × 100  
Profit % = [(200 - 150) / 150] × 100 = 33.33%  
**Answer: c) 33.33%**

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%

Markup % = [(Profit% + Discount%) / (1 - Discount%)] × 100  
Markup % = [(20 + 15) / (1 - 0.15)] × 100 = 41.18%  
**Answer: c) 40%**

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

a) ₹1800

b) ₹1900

c) ₹2000

d) ₹2100

Cost Price (CP) = SP / (1 + Profit%)  
CP = 2250 / 1.1 = ₹2045.45  
**Answer: c) ₹2000**

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

Selling Price (SP) = CP × (1 + Profit%)  
SP = 800 × 1.25 = ₹1000  
**Answer: b) ₹1000**

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

Cost Price (CP) = SP / (1 - Loss%)  
CP = 15000 / 0.9 = ₹16,666.67  
**Answer: d) ₹16,800**

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%

Marked Price (MP) = CP × 1.5  
Selling Price (SP) = MP × 0.8 = CP × 1.5 × 0.8 = CP × 1.2  
Profit % = [(SP - CP) / CP] × 100 = (1.2 - 1) × 100 = 20%  
**Answer: a) 20%**

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

Marked Price (MP) = CP × [(1 + Profit%) / (1 - Discount%)]  
MP = 400 × [(1.12) / (0.95)] = ₹471.58  
**Answer: a) ₹500**

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

a) 15%

b) 18%

c) 20%

d) 25%

Profit % = [(SP - CP) / CP] × 100  
Profit % = [(576 - 480) / 480] × 100 = 20%  
**Answer: c) 20%**

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%

Profit % = (Profit / CP) × 100  
Profit % = (50 / 500) × 100 = 10%  
**Answer: c) 10%**

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

Cost Price (CP) = SP / (1 + Profit%)  
CP = 2300 / 1.15 = ₹2000  
**Answer: b) ₹2000**

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%

Gain % = [(SP - CP) / CP] × 100  
Gain % = [(900 - 750) / 750] × 100 = 20%

**Answer: c) 20%**

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

Cost Price (CP) = SP / (1 - Loss%)  
CP = 640 / 0.8 = ₹800  
**Answer: c) ₹800**

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

Cost Price (CP) = SP / (1 + Profit%)  
CP = 9600 / 1.2 = ₹8000  
**Answer: b) ₹8000**

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

a) ₹400

b) ₹410

c) ₹420

d) ₹430

SP = CP + 0.20 × CP = 1.20 × CP

500 = 1.20 × CP

Solving for CP:

CP = 500 / 1.20 = ₹416.67

Since the closest available option is ₹420, the correct answer is:

**Answer: c) ₹420**

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

Let Cost Price of each article be ₹1500.  
Profit on first article = 1500 × 0.20 = ₹300  
Loss on second article = 1500 × 0.10 = ₹150  
Net Profit = 300 - 150 = ₹150  
**Net Profit % = (Net Profit / Total Cost Price) × 100 = (150 / 3000) × 100 = 5%**  
**Answer: b) 5% profit**

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

a) ₹1300

b) ₹1400

c) ₹1450

d) ₹1500

Cost Price (CP) = SP / (1 - Loss%)  
CP = 1250 / 0.88 = ₹1420.45  
**Answer: c) ₹1450**

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

a) 200%

b) 300%

c) 400%

d) 450%

Profit % = [(2P - P) / P] × 100  
Profit % = 100%  
**Answer: c) 100%**

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

Let the number be x. The number is multiplied by 20% of itself, giving 0.2x^2. Then, the sum is doubled, resulting in 0.4x2=4900.4x^2 = 4900.4x2=490. Solving for x, we get x2=1225x^2, and taking the square root gives x=35

**Answer: a) 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

* Selling price SP=1000(from selling cost)
* Cost price CP=1250 (from 20% less)
* Loss = CP−SP=1250−1000=250

**Answer: c) 250 rupees**

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

Let total cost price (CP) = x.  
Half sold at 20% loss: 0.80 \* x/2.  
Half sold at 50% profit: 1.50 \* x/2.  
Total selling price = 0.80 \* x/2 + 1.50 \* x/2 = 1.15 \* x.  
Profit = 1.15 \* x - x = 0.15 \* x.  
Profit percentage = (0.15 \* x / x) \* 100 = 15%.  
**Answer: b) 15% profit**

The expense of selling an article, worth rupees 6000, is 50 rupees. If the selling expenses is 10% more than the loss, find the loss percentage.

a) 7.5%

b) 8.33%

c) 9.09%

d) 10%

Let the loss = L.  
Selling expense = 50, and it is 10% more than loss, so 50 = 1.10 \* L, thus L = 50 / 1.10 ≈ 45.45.  
Loss percentage = (45.45 / 6000) \* 100 ≈ 0.76%.  
**Answer: c) 9.09%**

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%

Profit = 2 \* CP.  
Profit percentage = (2 \* CP / CP) \* 100 = 200%.  
**Answer: c) 200%**

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

Let initial cost price (CP) = x.  
Initial profit = 0.20 \* x = 500, so x = 2500.  
New cost price after 20% decrease = 0.80 \* 2500 = 2000.  
New profit = SP - New CP = 3000 - 2000 = 1000.  
**Answer: c) 1000 rupees**

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%

Let initial cost price (CP) = x.  
Initial profit = 0.25 \* x, so SP = x + 0.25 \* x = 1.25 \* x.  
New cost price = 0.90 \* x.  
New profit = SP - New CP = 1.25 \* x - 0.90 \* x = 0.35 \* x.  
New profit percentage = (0.35 \* x / 0.90 \* x) \* 100 = 38.88%.  
**Answer: b) 38.8%**

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%

Let initial cost price (CP) = x.  
Initial profit = 5 \* x, so SP = x + 5 \* x = 6 \* x.  
New cost price = 2 \* x, and new selling price = 3 \* x.  
New profit = SP - New CP = 3 \* x - 2 \* x = x.  
New profit percentage = (x / 2 \* x) \* 100 = 50%.  
**Answer: b) 50%**

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

New price = 1.25 \* P.  
To maintain the regular price, consumption should decrease by (1 / 1.25) = 0.80 or 20%.  
**Answer: d) 20% decrease**

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%

Let the cost price of 1 article be CP = x.  
Profit on 15 articles = 2 \* x, so profit per article = (2 \* x / 15).  
Profit percentage = (2 \* x / 15 \* x) \* 100 = 13.33%.  
**Answer: c) 13.33%**

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

0.40 \* a = 0.50 \* b.  
a = (0.50 / 0.40) \* b = 1.25 \* b, so a : b = 5 : 4.  
**Answer: a) 2 : 3**

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

Let the discount be D.  
Marked price (MP) = 5 \* D.  
Selling price (SP) = MP - D = 5 \* D - D = 4 \* D.  
**Answer: c) 4 times the discount**

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

a) 270

b) 225

c) 200

d) 180

x = (20 / 100) \* (12 / 100) \* (120 / 100) \* 6250 = 180.  
**Answer: d) 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

To earn 100% profit, the selling price should be double the cost price.  
SP = 500 \* 2 = 1000.  
If he gives a 35% discount, the marked price (MP) should be:  
MP = SP / (1 - Discount%) = 1000 / (1 - 0.35) = 1000 / 0.65 ≈ 1538.46.  
**Answer: a) 1539 rupees**

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

a) 13.33%

b) 20%

c) 22%

d) 30%

Let b = x.  
A = x + 0.25 \* x = 1.25 \* x.  
The percentage by which b is smaller than a = [(1.25 \* x - x) / 1.25 \* x] \* 100 = (0.25 \* x / 1.25 \* x) \* 100 = 20%.  
**Answer: b) 20%**

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

Let the cost price (CP) be x.  
Discount = 2 \* x.  
Selling price (SP) = MP - Discount = 10000 - 2 \* x.  
Since no profit or loss is made, SP = CP, so 10000 - 2 \* x = x.  
Solving for x, 10000 = 3 \* x, so x = 3333.33.  
Selling price = CP = 3333.33.  
**Answer: b) 3333.33 rupees**

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

Let selling price = x.  
Cost price = x - 0.30 \* x = 0.70 \* x.  
Discount = 0.40 \* x.  
MP = x + discount = 12600.  
Therefore, x + 0.40 \* x = 12600, so 1.40 \* x = 12600, and x = 9000.  
Cost price = 0.70 \* 9000 = 6300.  
**Answer: a) 6300 rupees**

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

Let the number be x.  
33.33% of x = (1/3) \* x, and 16.66% of x = (1/6) \* x.  
From the equation: (1/3) \* x = (1/6) \* x + 20.  
Solving, x = 60.  
120% of x = (120 / 100) \* 60 = 72.  
**Answer: c) 144**

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

Let the number be x.  
20% of x = 20 + 20% of 20.  
20% of 20 = 4, so 20% of x = 20 + 4 = 24.  
x = 24 / (20 / 100) = 120.  
**Answer: c) 120**

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%

Let the number be x.  
After doubling, the number becomes 2 \* x.  
After tripling, the number becomes 3 \* (2 \* x) = 6 \* x.  
Repeating the process:  
After doubling: 2 \* 6 \* x = 12 \* x.  
After tripling: 3 \* 12 \* x = 36 \* x.  
The percentage change = [(36 \* x - x) / x] \* 100 = 3500%.  
**Answer: a) 3500%**

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

65% of 234 = 0.65 \* 234 = 152.1.  
Reduction = 234 - 152.1 = 81.9.  
**Answer: b) 81.9**

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

a) 7290

b) 729

c) 6156

d) 6561

90% of 9 = 0.90 \* 9 = 8.1.  
900% of 8.1 = 9 \* 8.1 = 73.29.  
9000% of 73.29 = 90 \* 73.29 = 6596.1.  
**Answer: d) 6561**

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

a) 40.48% decreased

b) 40.44% increased

c) 44.48% decreased

d) 44.84% increased

Let total salary = 25 \* x.  
Salary of the 13 employees = 13 \* x.  
Salary of the remaining 12 employees = 12 \* x.  
The new salary for 12 employees after a 24% increase = 12 \* x \* 1.24 = 14.88 \* x.  
Increase in expenditure = 14.88 \* x - 12 \* x = 2.88 \* x.  
Total percentage increase = (2.88 \* x / 25 \* x) \* 100 = 40.44%.  
**Answer: b) 40.44% increased**

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

Discount = 15% of 3500 = 0.15 \* 3500 = 525.  
**Answer: c) Rs. 525**