Profit and Loss

Q1. A man bought a number of oranges at 3 for a rupee and an equal number at 2 for a rupee. At what price per dozen, should he sell them to make a profit of 20%?
(a) Rs. 4
(b) Rs. 5
(c) Rs. 6
(d) Rs. 7

Q2. One saree was purchased for Rs. 564 after getting a discount of 6% and another saree was purchased for Rs. 396 after getting a discount of 1%. Taking both the items as a single transaction, what is the percentage of discount?
(a) 3.5
(b) 4
(c) 7
(d) 7.5

Q3. A man sold two watches, each for Rs. 495. If he gained 10% on one watch and suffered a loss of 10% on the other, then what is the loss or gain percentage in the transaction ?
(a) 1% gain
(b) 1% loss
(c) 100/99% loss
(d) No gain no loss

Q4. A fruit-seller buys lemons at 2 for a rupee and sells them at 5 for three rupees. What is his gain percent?
(a) 10%
(b) 15%
(c) 20%
(d) 25%

Q5. The merchant earns a profit of 20% by selling a basket containing 80 apples which cost Rs. 240. But he gives one-fourth of it to his friend at cost price and sells the remaining apples. In order to earn the same profit, at what price must he sell each apple?
(a) Rs. 3.00
(b) Rs. 3.60
(c) Rs. 3.80
(d) Rs. 4.80

Q6. A cloth store is offering "Buy 3, get 1 free". What is the net percentage discount being offered by the store?

(a) 20%
(b) 25%
(c) 30%
(d) $33\frac{1}{3}\%$

Q7. A person sold an article for Rs. 3,600 and got a profit of 20%. Had he sold the article for Rs. 3,150, how much profit would he have got?
(a) 4%
(b) 5%
(c) 6%
(d) 10%

Q8. Two lots of onions with equal quantity, one costing Rs. 10 per kg and the other costing Rs. 15 per kg, are mixed together and whole lot is sold at Rs. 15 per kg. What is the profit or loss?
(a) 10% loss
(b) 10% profit
(c) 20% profit
(d) 20% loss

Q9. On a 20% discount sale, an article costs Rs. 596. What was the original price of the article?
(a) Rs. 720
(b) Rs. 735
(c) Rs. 745
(d) Rs. 775

Q10. When an article is sold at 20% discount, the selling price is Rs. 24. What will be the selling price when the discount is 30%?
(a) Rs. 25
(b) Rs. 23
(c) Rs. 21
(d) Rs. 20

Solutions

S1. Ans (c)
Sol. Given: Equal number of oranges bought at 3 for a rupee and 2 for a rupee.
Formula: Selling Price = Cost Price × (1 + Profit%).

- Cost Price (CP) of 6 oranges bought at 3 for 1 rupee = 2 rupees.
- CP of 6 oranges bought at 2 for 1 rupee = 3 rupees.
- Total CP for 12 oranges = 2 + 3 = 5 rupees.
- To make a 20% profit, Selling Price (SP) = 5 × 1.20 = 6 rupees.

Correct Answer: (c) Rs. 6 per dozen

S2. Ans (b)
Sol. Given:

- First saree after a 6% discount costs Rs. 564.
- Second saree after a 1% discount costs Rs. 396.

Formula:
Total Discount % = [(Total Marked Price - Total Selling Price) / Total Marked Price] × 100

- Marked Price (MP) of the first saree: Let it be x.
- x - 0.06x = 564 → x = 600
- MP of the second saree: Let it be y.
- y - 0.01y = 396 → y = 400
- Total MP = 600 + 400 = 1000
- Total Selling Price (SP) = 564 + 396 = 960
- Discount % = [(1000 - 960) / 1000] × 100 = 4%

Correct Answer: (b) 4%

S3. Ans (b)
Sol. Given: Each watch was sold for Rs. 495. One was sold at 10% profit, the other at 10% loss.
Formula:
Total Loss = Total Cost Price - Total Selling Price
Loss % = (Total Loss / Total Cost Price) × 100

- SP of both watches = 495 + 495 = 990
- Cost Price (CP) of the first watch: 495 / 1.10 = 450
- CP of the second watch: 495 / 0.90 = 550
- Total CP = 450 + 550 = 1000
- Loss = 1000 - 990 = 10
- Loss % = (10 / 1000) × 100 = 1%

Correct Answer: (b) 1% loss

S4. Ans (c)
Sol. Given: Buys lemons at 2 for 1 rupee and sells at 5 for 3 rupees.
Formula:
Gain % = (Gain / Cost Price) × 100

- CP of 5 lemons = 2.5 rupees.
- SP of 5 lemons = 3 rupees.
- Gain = 3 - 2.5 = 0.5 rupees.
- Gain % = (0.5 / 2.5) × 100 = 20%

Correct Answer: (c) 20%

S5. Ans (c)
Sol. Given:

- 80 apples cost Rs. 240; one-fourth sold at cost price.
- Profit expected: 20%
- **Formula:**
- Profit % = (SP - CP) / CP × 100

- CP of 80 apples = 240
- Desired SP for 20% profit = 240 × 1.20 = 288
- Sold 20 apples at Rs. 3 each, earning 60 rupees.
- SP required from the remaining 60 apples = 228 rupees.
- Price per apple = 228 / 60 = 3.80

Correct Answer: (c) Rs. 3.80

S6. Ans (b)
Sol. Given: Buy 3, get 1 free.
Formula:
Net Discount % = (Free Items / Total Items) × 100

- Effective offer: Buy 4, pay for 3.
- Discount % = (1 / 4) × 100 = 25%

Correct Answer: (b) 25%

S7. Ans (b)
Sol. Given: Selling Price = Rs. 3600, 20% profit.
Formula:
SP = CP × (1 + Profit%)
Profit % = (Profit / CP) × 100

- CP = 3600 / 1.20 = 3000
- If sold at Rs. 3150, Profit = 3150 - 3000 = 150
- Profit % = (150 / 3000) × 100 = 5%

Correct Answer: (b) 5%

S8. Ans (c)
Sol. Given: Equal quantities, cost Rs. 10 and Rs. 15 per kg, mixed and sold at Rs. 15 per kg.
Formula:
Profit % = (SP - CP) / CP × 100

- CP per kg = (10 + 15) / 2 = 12.50
- SP = 15 per kg
- Profit = 15 - 12.50 = 2.50
- Profit % = (2.50 / 12.50) × 100 = 20%

Correct Answer: (c) 20% profit

S9. Ans (c)
Sol. Given: After 20% discount, the price is Rs. 596.
Formula:
SP = MP × (1 - Discount%)

- Let MP = x
- 0.80x = 596
- x = 745

Correct Answer: (c) Rs. 745

S10. Ans (c)
Sol. Given: 20% discount, SP = Rs. 24.
Formula:
MP = SP / (1 - Discount%)

- Let MP = x
- 0.80x = 24
- x = 30

For 30% discount:
New SP = 30 × 0.70 = Rs. 21
Correct Answer: (c) Rs. 21