Profit & Loss - Solved Examples

Q 1 - A vendor bought 6 oranges for Re 10 and sold them at 4 for Re 6. Find his loss or gain percent.

A - 8% gain

B - 10% gain

C - 8% loss

D - 10% loss

Answer - D

Explanation

```
Suppose, number of oranges bought = LCM of 6 and 4 = 12
∴CP = Re (10/6 * 12) = Re 20 and SP = Re (6/4 * 12) = Re 18
∴Loss% = (2/20 * 100)% = 10%
```

Q 2 - By selling 33 meters of cloth, one gains the selling price of 11 meters. Find the gain percent.

A - 50%

B - 45%

C - 40%

D - 60%

Answer - A

Explanation

```
(SP of 33m) - (CP of 33m) = Gain = SP of 11m
∴ SP of 22m = CP of 33m
Let CP of each meter be Re 1. Then, CP of 22m = Re 22.
Hence SP of 22m = Re 33.
∴ %Gain = 11/22 * 100
= 50%
```

Q 3 - Pure ghee costs Re 100 per kg. A shopkeeper mixes vegetable oil costing Re 50 per kg and sells the mixture at Re 96 per kg, making a profit of 20%. In what ratio does he mix the pure ghee with the vegetable oil.

A - 3:2

B - 2:3

C - 4:3

D - 3:1

Answer - A

Explanation

```
Mean Cost price = Re (100/120)*96 = Re 80 per kg
Apply rule of allegation,
there4; Required ratio = 30:20 = 3:2
```

Q 4 - The CP of 25 articles is equal to SP of 20 articles. Find the loss or gain percent.

A - 35%

B - 30%

C - 25%

D - None of these

Answer - C

Explanation

```
Let the CP of each article = Re 1.
Then CP of 20 articles = Re 20.
SP of 20 articles = CP of 25 articles = Re 25.
∴ Gain% = (5/20)*100% = 25%
```

Q 5 - A shopkeeper bought 80 kg of sugar at Re 13.50/kg and mixed it with 120 kg sugar at Re 16/kg. If he is to make a profit of 16% what rate should he sell the sugar to his customers?

A - Re 12/kg

B - Re 15.25/kg

C - Re 17/kg

D - Re 17.40/kg

Answer - D

Explanation

```
CP of 200 kg of mixture = Re (80 * 13.50) + (120 * 16) = Re 3000
SP = 116% of Re 3000 = Re (116/100)*3000 = Re 3480
```

∴Rate of SP = Re 3480/200 = Re 17.40/kg

Q 6 - A man bought cookies at 3 for a rupee. How many for a rupee should he sell to make a profit a 50%.

A - 1

B - 2

C - 1.5

D - None of these

Answer - B

Explanation

```
CP of 3 cookies = Re 1
SP of 3 cookies = 150% of Re 1 = 3/2

For Re 3/2, the man sells 3 cookies.
Hence for Re 1, number of cookies sold = 3*2/3 = 2
```

Q 7 - Anil buys a calculator for Re 600 and sells it to Vikash at 10% profit. Vikash sells it to Chandan for 5 % profit. Chandan after using it for certain time, sells it to Dinesh at a loss of 20%. For how much Chandan sell the calculator to Dinesh.

A - Re 550.50

B - Re 564.40

C - Re 554.40

D - None of these

Answer - C

Explanation

```
SP for Chandan = 600 * (110/100) * (105/100) * (80/100)
= 600 * 924/1000
= Re 554.40
```

Q 8 - An article is sold by X to Y at a loss of 20%, Y to Z at a gain of 15%, Z to W at a loss of 5% and W to V at a profit of 10%. If v had to pay Re 500, how much X paid for it?

A - Re 520.07

B - Re 490.07

C - Re 510.07

D - Re 530.07

Answer - A

Explanation

```
CP for X = 500 * (100/80) * (100/115) * (100/95) * (100/110)
= 500 * 10000/9614
= Re 520.07
```

Q 9 - A vendor when could not find buyers for his vegetable at Re 10/kg, reduced the rate to Re 8.10 per kg but uses a faulty weight of 900 gm in place of 1 kg weight. Find the percent change in the actual price or loss.

A - 8%

B - 8.10%

C - 9%

D - 10%

Answer - D

Explanation

```
After the price was reduced, 900 gm now costs Re 8.10.
Hence 1000gm will cost (1000/900)*8.10 = Re 9
% change in actual price or loss = [(10 - 9)/10]*100%
= 10%
```

Q 10 - A trader marks the SP of an object at a profit of 20%. Considering the demand o the object, he further increases the price by 10%. Find the final profit %.

A - 35%

B - 31%

C - 32%

D - 25%

Answer - C

Explanation

```
Let the CP = Re 100
∴ SP = 100 * (120/100) * (110/100)
= Re 132

Final profit = (132 - 100)*100%
= 32%
```

Q 11 - An article when sold for Re 4600 makes a 15% profit. Find the profit or loss % if it was sold for Re 3600.

A - 10% gain

B - 11% loss

C - 10% loss

D - 11% gain

Answer - C

Explanation

```
CP = 4600 * (100/115)
=Re 4000

Loss% = [(4000-3600)/4000]*100%
= 10%
```

Q 12 - A seller sells a watch at 5% loss. If he had bought it at 20% more and sold it for Re 115 less, he would have incurred a loss of 40%. Find the cost price of the watch.

A - Re 500

B - Re 5000

C - Re 550

D - Re 450

Answer - A

Explanation

```
Assume CP = x
Selling price at the first case = (95/100)x
Selling price at the second case = (60/100)*(120/100)x
= (7200/10000)x

As per question,
(95/100)x - (7200/10000)x = 150
Or, x = Re 500
```

Q 13 - When a man sold an article for Re 540, he made a loss of 10%. At what price should he sell it, so that he incurs a loss of only 5%.

A - Re 550

B - Re 525

C - Re 575

D - Re 570

Answer - D

Explanation

```
CP = 540*(100/90)
= Re 600

New SP = 600*(95/100)
= Re 570
```

Q 14 - Ram sells chocolates at a profit of 20% for Re 60. What will be the percentage loss or gain if he reduces the price to Re 55 due to less demand.

A - 11%

B - -11%

C - 10%

D - -10%

Answer - C

Explanation

```
CP = 60*(100/120)
= Re 50
New SP = Re 55
Gain% = (5/50)*100
=10%
```

Q 15 - A shopkeeper buys rice for Re 1600. He had to sell 1/4th at a loss of 20%. If he is to make an overall gain of 10%, what percentage of profit he needs to make out of the remaining stock of rice?

A - 20%

B - 25%

C - 15%

D - 18%

Answer - A

Explanation

```
CP of 1/4th of the stock = 1600/4 = Re 400
SP of 1/4th of the stock = 400*(80/100)
=Re 320
```

In order to make a profit of 10% on total CP, the SP should be:
SP = 1600*(110/100)
= Re 1760

∴The SP for the remaining 3/4th of the stock
should be Re 1760 - Re 320 = Re 1440.

Cost Price of the 3/4th of stock
= Re 1600 - Re 400 = Re 1200.
∴%Gain = [(1440-1200)/1200*100}]
= (240/1200)*100
= 20%

Q 16 - A 10% hike in the price of wheat forces a person to purchase 2 kg less for Re 110. Find the new and the original price of the wheat.

A - Re 10/kg

B - Re 5/kg

C - Re 6/kg

D - Re 8/kg

Answer - B

Explanation

10% of Re 110 = Re 11
Cost of 2 kg of wheat at new price = Re 11
So, cost of 1 kg of wheat at new price = Re 5.50 = Re 11/2

Original Price = (11/2)*(100/110)
= Re 5 per kg

Q 17 - 10 kg of rice costs as much as 20 kg of wheat, 25 kg of wheat costs as much as 2kg of tea, 5 kg of tea costs as much as 25kg of sugar. Find the cost of 6 kg of sugar if 14 kg of rice costs Re 32.

A - Re 50

B - Re 55

C - Re 60

D - Re 65

Answer - C

Explanation

```
4 kg of rice costs Re 32
∴10kg of rice will cost = (32/4)*10 = Re 80

20 kg of wheat costs Re 80.
∴25kg of wheat costs = (80/20)*25 = Re 100

2kg of tea costs Re 100
∴5 kg of tea costs = (100/2)*5 = Re 250

25kg of sugar costs Re 250.
∴6 kg of sugar costs = (250/25)*6 = Re 60
```

Q 18 - A fruit seller sells bananas at a profit of 20%. If he increases the selling price of each banana by 25 paisa, he earns a profit of 45%. Find the initial selling price of each banana and also its cost price.

A - SP = Re1.20, CP = Re 1

B - SP = Re1.50, CP = Re 1

C - SP = Re1.20, CP = Re 1.10

D - None of the above.

Answer - A

Explanation

```
Let CP = x paisa.
Initial SP = x*(120/100) paisa

As per question,
120x/100 + 25 = (145/100)x
or, 145x/100 - 120x/100 = 25
or, 25x/100 = 25
or, x = 100 paisa

CP = 100 paisa or Re 1.
Initial SP = 120 paisa or Re 1.20.
```

Q 19 - A man sold two plots for Re 8 lakhs each. One on he earns a profit of 16% and the other he loses 16%. How much does he loss or gain in the whole transaction?

A - 2.5% loss

B - 3% gain

C - 2.56% loss

D - 3.56% loss

Answer - C

Explanation

```
Applying direct formula, %loss = (16/10)2%
= 64/25%
= 2.56%
```

Q 20 - An uneducated retailer marks all his goods at 50% above the cost price and thinking that he will still make 25% profit, offers a discount of 25% on the marked price. What is his actual profit on the sales?

A - 10%

B - 12.50%

C - 11.50%

D - 12%

Answer - B

Explanation

```
Let CP = Re 100.
The, marked price, MP = Re 150
SP = 75% of Re 150 = Re 112.50
∴ Gain% = 12.50%
```