1- A trader mixes three varieties of groundnuts costing Rs. 50, Rs. 20 and Rs. 30 per kg in the ratio 2 : 4 : 3 in terms of weight, and sells the mixture at Rs. 33 per kg. What percentage of profit does he make?

- **A.**8%
- **B.**9%
- **C.**10%
- **D.**11%
- **E.**None of these

Answer & Explanation

Answer - **C** (10%)

Explanation - Suppose he bought 2 kg, 4 kg and 3 kg of the three varieties.

C.P. of 9 kg = Rs. (2 x 50 + 4 x 20 + 3 x 30) = Rs. 270

S.P. of 9 kg = Rs. (9 x 33) = Rs. 297

$$\text{Profit\%} = \frac{27}{270} \times 100 \ \% = 10\%$$

2- A man bought apples at the rate of 8 for Rs. 34 and sold them at the rate of 12 for Rs. 57. How many apples should be sold to earn a net profit of Rs. 45?

- **A.**85
- **B.**90
- **C.**95
- **D.**100
- **E.**None of these

Answer & Explanation

Answer - **B** (90)

Explanation -

$$\text{C.P. of 1 apple} = \frac{34}{8} = 4.25, \quad \text{S.P. of 1 apple} = \frac{57}{12} = \text{Rs. } 4.75$$

Profit on each apple = Re. 0.50

$$\text{Number of apples required} = \frac{45}{0.50} = 90$$

3- Arun purchased 30 kg of wheat at the rate of Rs. 11.50 per kg and 20 kg of wheat at the rate of Rs. 14.25 per kg. He mixed the two and sold the mixture. Approximately what price per kg should he sell the mixture to make 30% profit?

- **A.**15.20
- **B.**16.30
- **C.**17.40
- **D.**18.50
- **E.**None of these

Answer & Explanation

Answer - **B** (16.30)

Explanation -   C.P. of 50 kg wheat = Rs. (30 x 11.50 + 20 x 14.25)

= Rs. (345 + 285) = Rs. 630

S.P. of 50 kg wheat = 130% of Rs. 630 = $\dfrac{130}{100}$ x 630 = Rs. 819

S.P. per kg = $\dfrac{819}{50}$ = Rs. 16.38 = Rs. 16.30.

4- By selling 45 lemons for Rs. 40, a man loses 20%. How many should be sell for Rs. 24 to gain 20% in the transaction?

- **A.**18
- **B.**19
- **C.**20
- **D.**23.8
- **E.**None of these

Answer & Explanation

Answer - **A** (18)

Explanation -

Let S.P. of 45 lemons be Rs. x. Then, 80 : 40 = 120 : x or x = $\dfrac{120 \times 40}{80}$ = 60

For Rs. 60, lemons sold = 45. For Rs. 24, lemons sold = $\dfrac{45}{60}$ x 24 = 18.

5- If 5% more is gained by selling an article for Rs. 350 than by selling it for Rs. 340, the cost of the article is:

- **A.** 180

- **B.** 190

- **C.** 196

- **D.** 200

- **E.** None of these

Answer & Explanation
Answer - **D** (200)
Explanation -

Let C.P. be Rs. x. Then, 5% of x = (350 - 340)= 10   => $\frac{x}{20}$ = 10 x = 200.

6- A vendor loses the selling price of 4 oranges on selling 36 oranges, His loss percent is:

- **A.** 9%

- **B.** 10%

- **C.** 11%

- **D.** 12%

- **E.** None of these

Answer & Explanation
Answer - **B** (10%)
Explanation - (C.P. of 36 mangoes) - (S.P. of 36 mangoes) - Loss = (S.P. of 4 mangoes)

S.P. of 40 mangoes = C.P. of 36 mangoes

Let C.P. of each mango be Re. 1.

C.P. of 40 mangoes = Rs. 40; S.P. of 40 mangoes = Rs. 36

Loss% = $\left(\frac{4}{40} \times 100 \right)$ % = 10%.

7- Some articles were bought at 6 for Rs. 5 and sold at 5 for Rs. 6. Gain percent is:

- **A.**33 1/3 %

- **B.**42%

- **C.**44%

- **D.**45%

- **E.**None of these

Answer & Explanation

Answer - **C** (44%)

Explanation - Suppose, number of articles bought = L.C.M. of 6 and 5 = 30.

C.P. of 30 articles = $\dfrac{5}{6}$ x 30 = 25.   S.P. of 30 articles = $\dfrac{6}{5}$ x 30 = 36

Gain% = $\dfrac{11}{25}$ x 100 % = 44%.

8- An article was sold for Rs. 144. If the percentage of profit was numerically equal to the cost price, the cost of the article was:

- **A.**75

- **B.**78

- **C.**80

- **D.**82

- **E.**None of these

Answer & Explanation

Answer - **C** (80)

Explanation - Let C.P. = Rs. x, Profit% = x% and S.P. = Rs. 144

$x = \dfrac{100}{(100 + x)}$ x 144 $\dfrac{x^2 + 100x}{14400} =$ $x^2 + 100x - 14400 = 0$

$x^2 + 180x - 80x - 14400 = 0$ $(x + 180)(x - 80) = 0$ $x = 80$.

9- In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?

- **A.**68

- **B.**70

- **C.**71

- **D.**72

- **E.**None of these

Answer & Explanation
Answer - **B** (70)

Explanation -   Let C.P. = Rs. 100. Then, Profit = Rs. 320, S.P. = Rs. 420

New C.P. = 125% of Rs. 100 = Rs. 125; New S.P. = Rs. 420.

Profit = Rs. (420 - 125) = Rs. 295

Required percentage = $\dfrac{295}{420} \times 100 \% = \dfrac{1475}{21}\% = 70\%.$

10- The ratio of the cost price and the selling price is 4 : 5. The profit percent is:

- **A.**10%

- **B.**20%

- **C.**25%

- **D.**30%

- **E.**None of these

Answer & Explanation
Answer - **C** (25%)

Explanation -

Let C.P. = Rs. 4x.   Then, S.P. = Rs. 5x.   Gain = Rs. (5x - 4x) = Rs. x.

Gain% $= \dfrac{x}{4x} \times 100 \% = 25\%.$