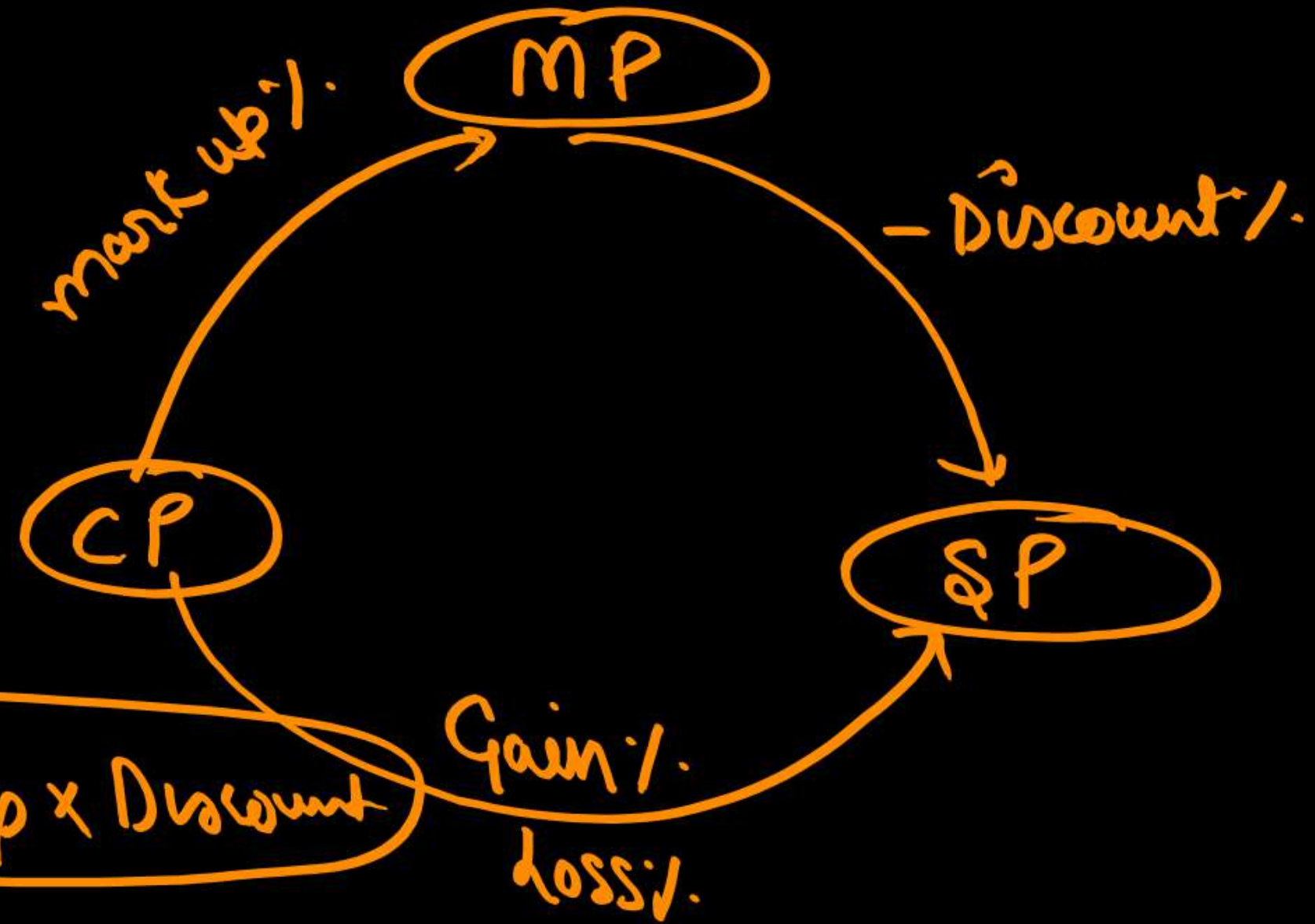


Profit & Loss

Markup/MP – अंकित मुल्य

Discount – छूट

Type-1



$$\text{Net P/L} = \text{Markup} \times \text{Discount}$$

Markup = $28\frac{4}{7}\%$ and discount = $11\frac{1}{9}\%$. Profit or Loss%=?

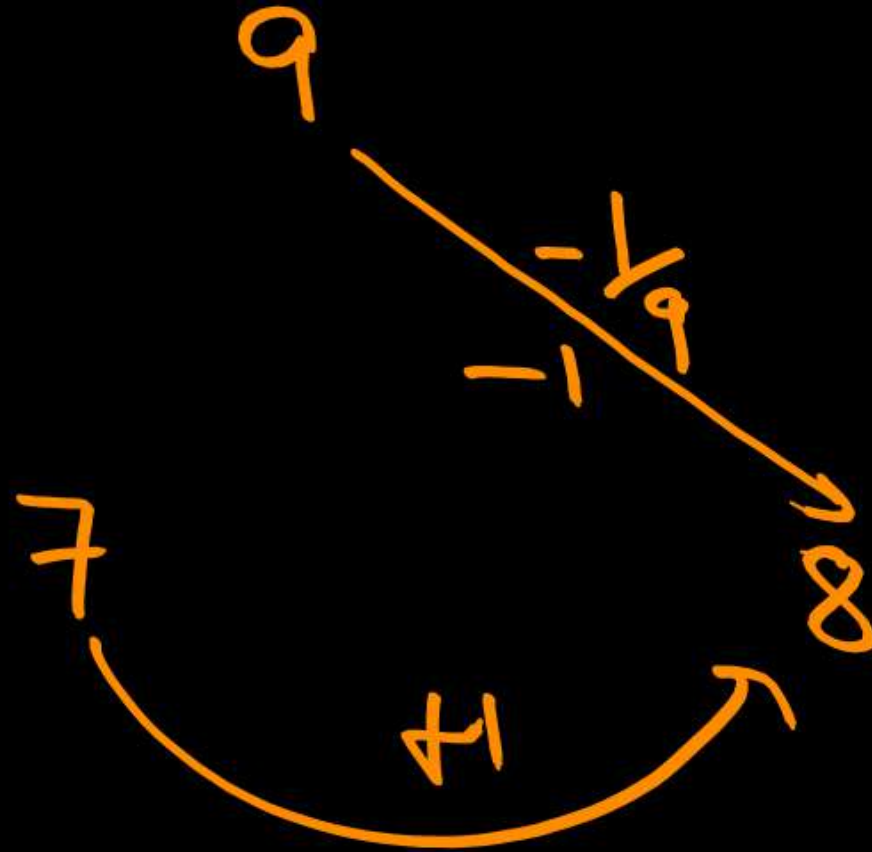
(a) 42.85

✓ (b) 14.28

(c) 16.66

(d) 12.5

(B)



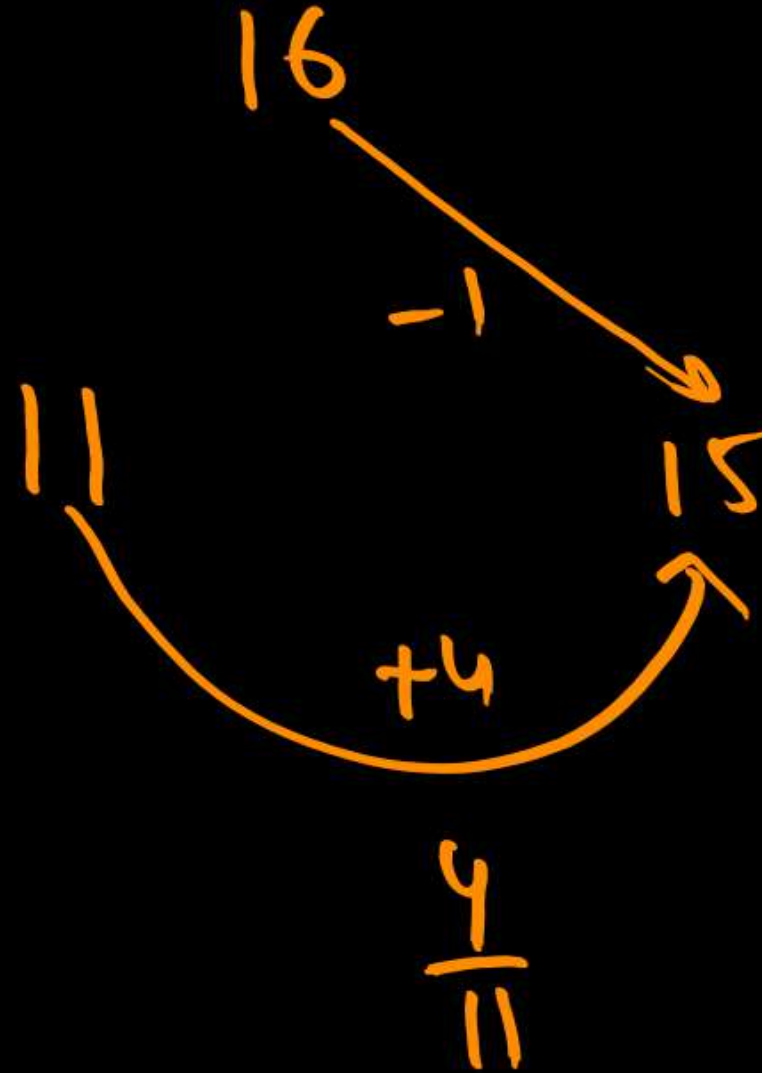
Markup = 45.45% and discount = ^{-1/16}6.25%. Profit or Loss %
= ?

(a) 33.33

☒ (b) 36.36

(c) 44.44

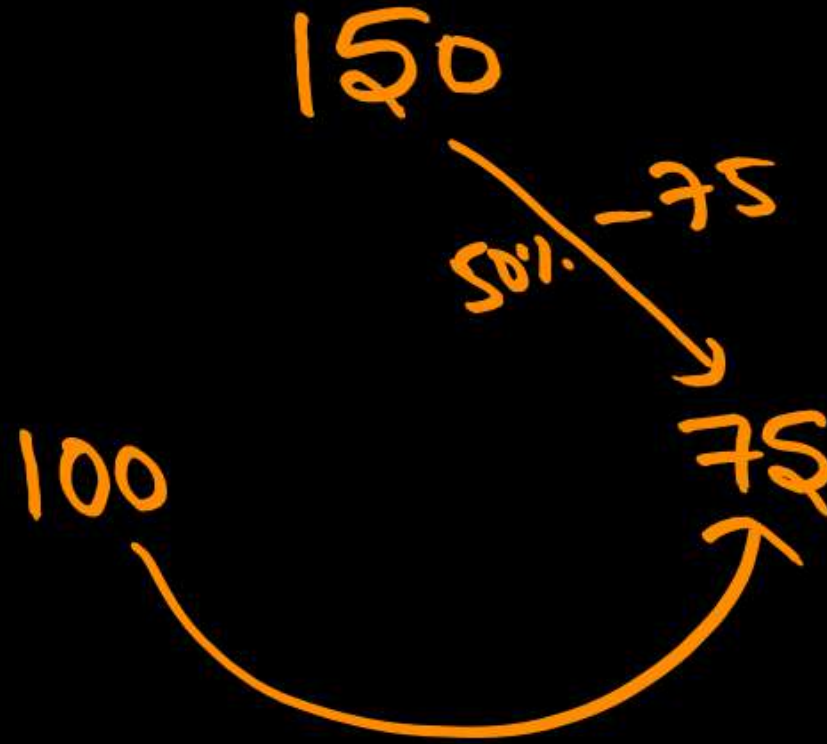
(d) 45.45



Markup = 50% and Loss = 25%. Discount% = ?

- ☒ (a) 50
- (b) 16.66
- (c) 40
- (d) 33.33

A



Markup = $33\frac{1}{3}\%$ and Profit = $16\frac{2}{3}\%$. Discount% = ?

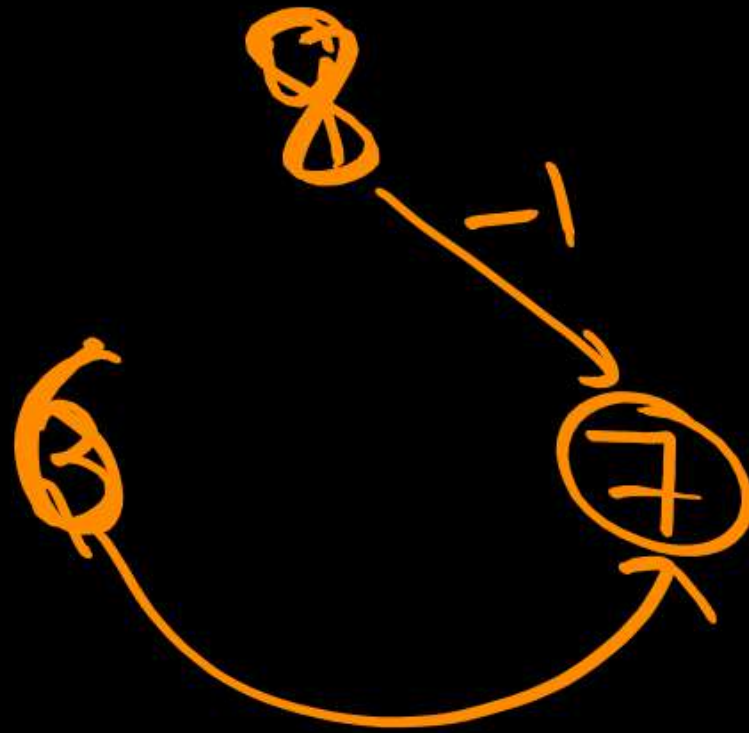
(a) 10

☒ (b) 12.5

(c) 20

(d) 16.66

☒ B



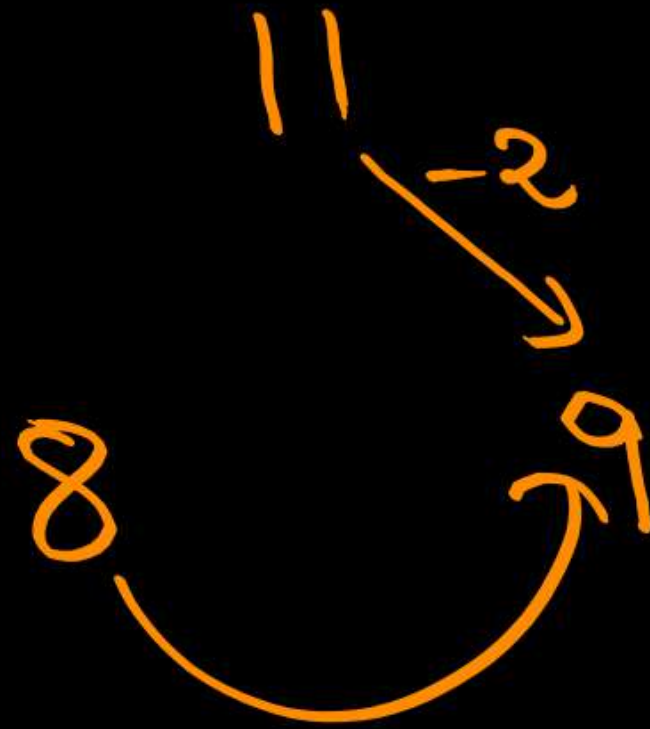
Markup = $37\frac{1}{2}\%$ and Profit = $12\frac{1}{2}\%$. Discount% = ?

☒ (a) 18.18

(b) 28.57

(c) 27.27

(d) 12.5



After allowing a discount of $11\frac{1}{9}\%$, profit is $14\frac{2}{7}\%$.

Markup% = ?

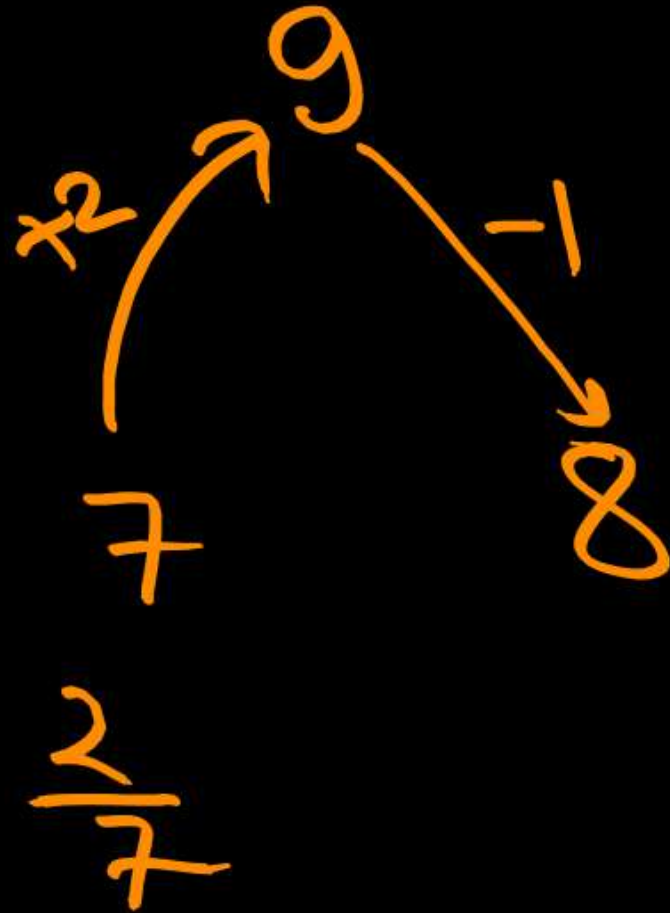
(a) 37.5

☒ (b) 28.57

(c) 25

(d) 22.22

(B)



After allowing a discount of $22\frac{2}{9}\%$, loss is $12\frac{1}{2}\%$.

Markup% = ?

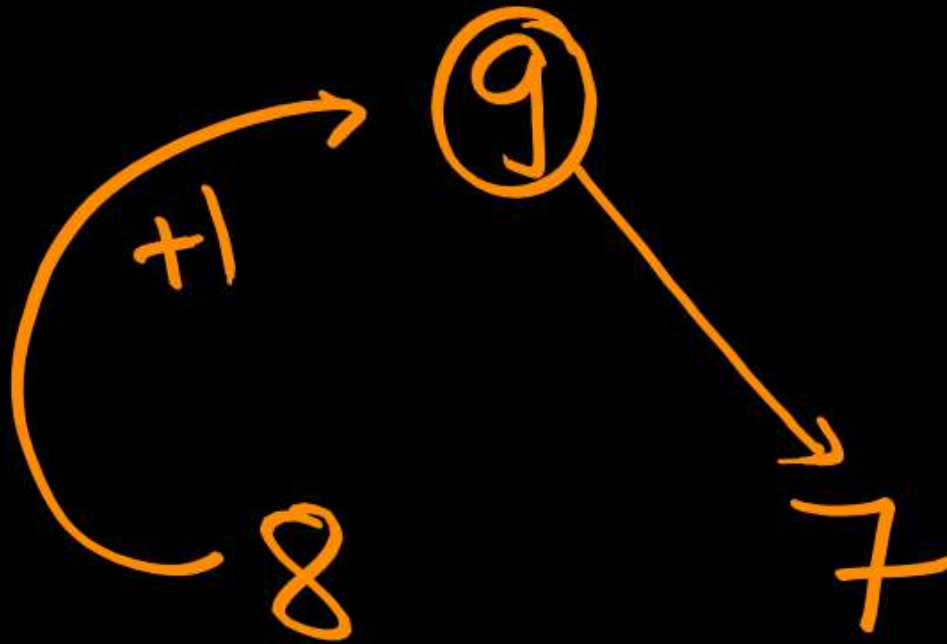
(a) 10

(b) 11.11

✓ (c) 12.5

(d) 20

©



After allowing a discount of $6\frac{1}{4}\%$, profit is 36.36%.

Markup% = ?

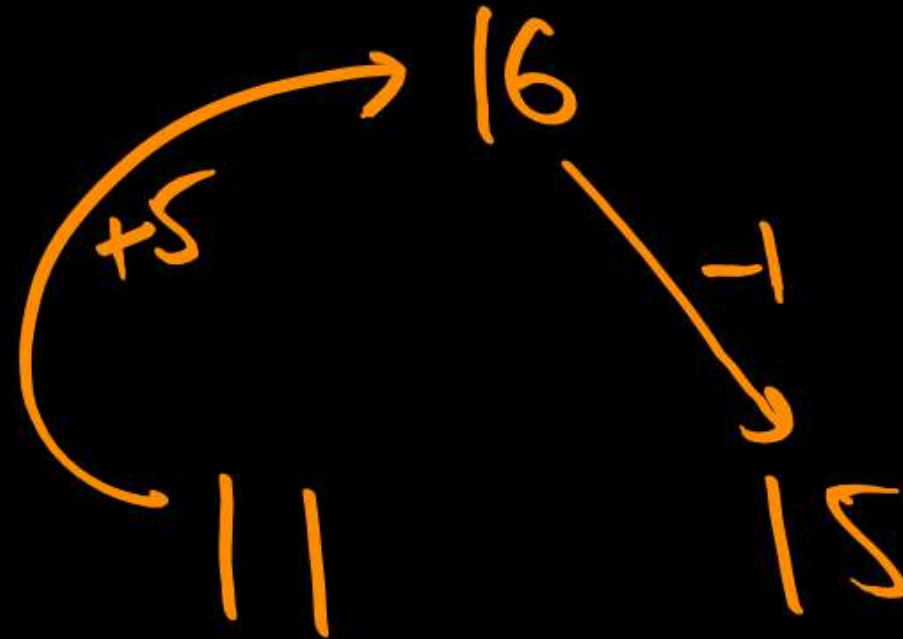
(a) 9.09

✓ (b) 45.45

(c) 12.5

(d) 10

(B)



Type-2

Markup = 30% and discount = 5%. Profit or Loss% = ?

- ☒ (a) 23.5
- (b) 24.5
- (c) 25
- (d) 20

(A)

$$\begin{array}{c} 30\% \quad -5\% \\ \swarrow \quad \searrow \\ \underline{30-5-\frac{30 \times 5}{100}} \end{array}$$

$$\begin{array}{r} 13 \times 19 \\ \hline 10 \quad 20 \end{array}$$

Markup = 20% with no discount. Profit or Loss% = ?

(a) 25

(b) 16.66

(c) 50

✓ (d) 20



Markup = 30% with no discount. Profit or Loss % = ?

(a) 42.85

(b) 33.33

(c) 45

(d) 30

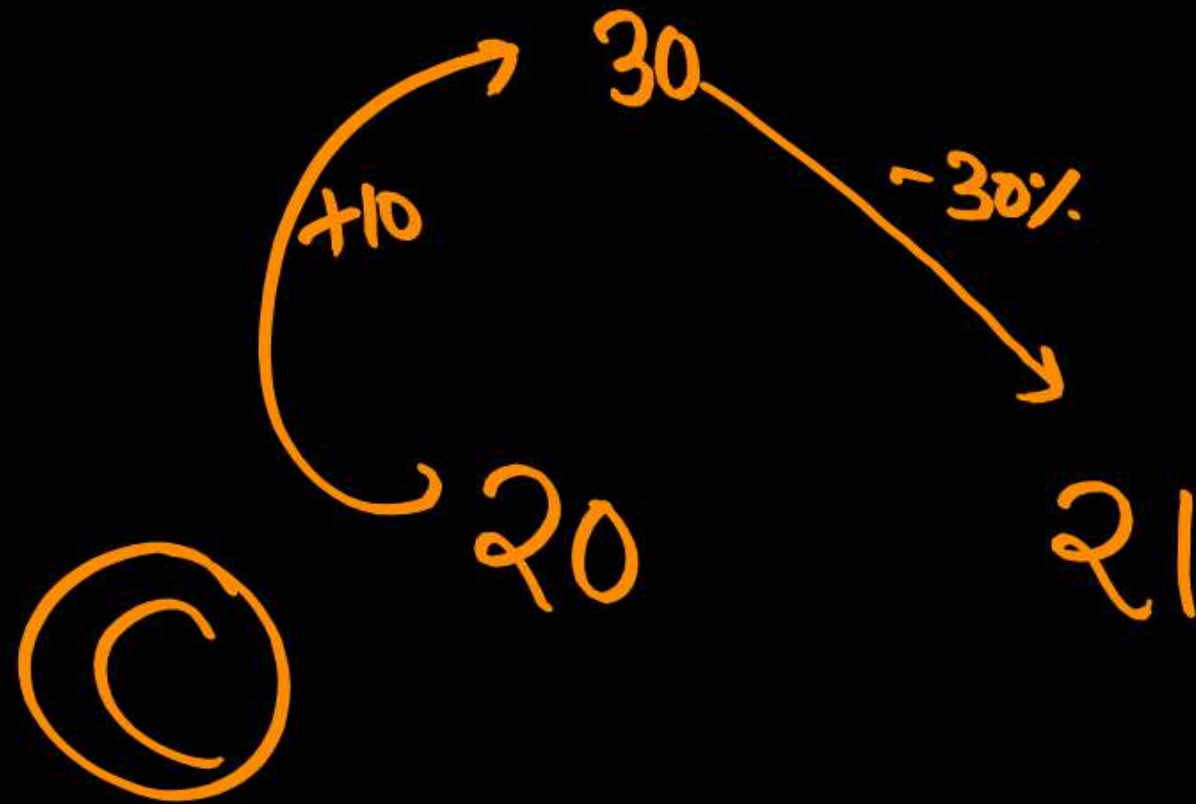
Markup = $x\%$, discount = 30% and Profit = 5%. $x = ?$

(a) 5

(b) 25

☒ (c) 50

(d) 150



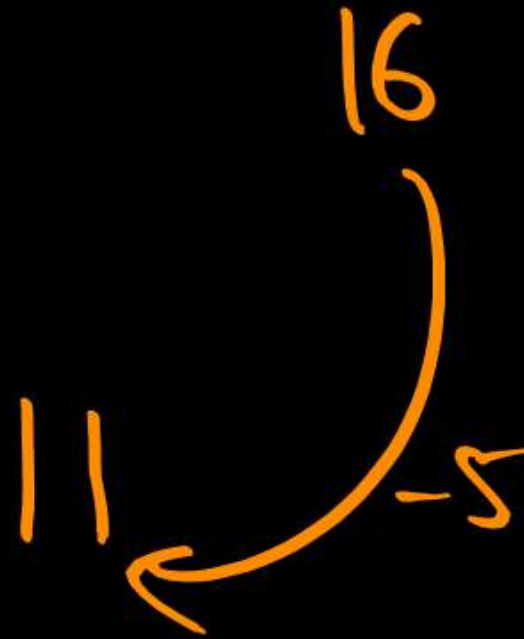
MP increased by $\frac{5}{11}$ 45.45% and sold at CP. Discount% = ?

(a) 33.33

☒ (b) 31.25

(c) 32.50

(d) 45.45



☒ (B)

$\frac{5}{18}$

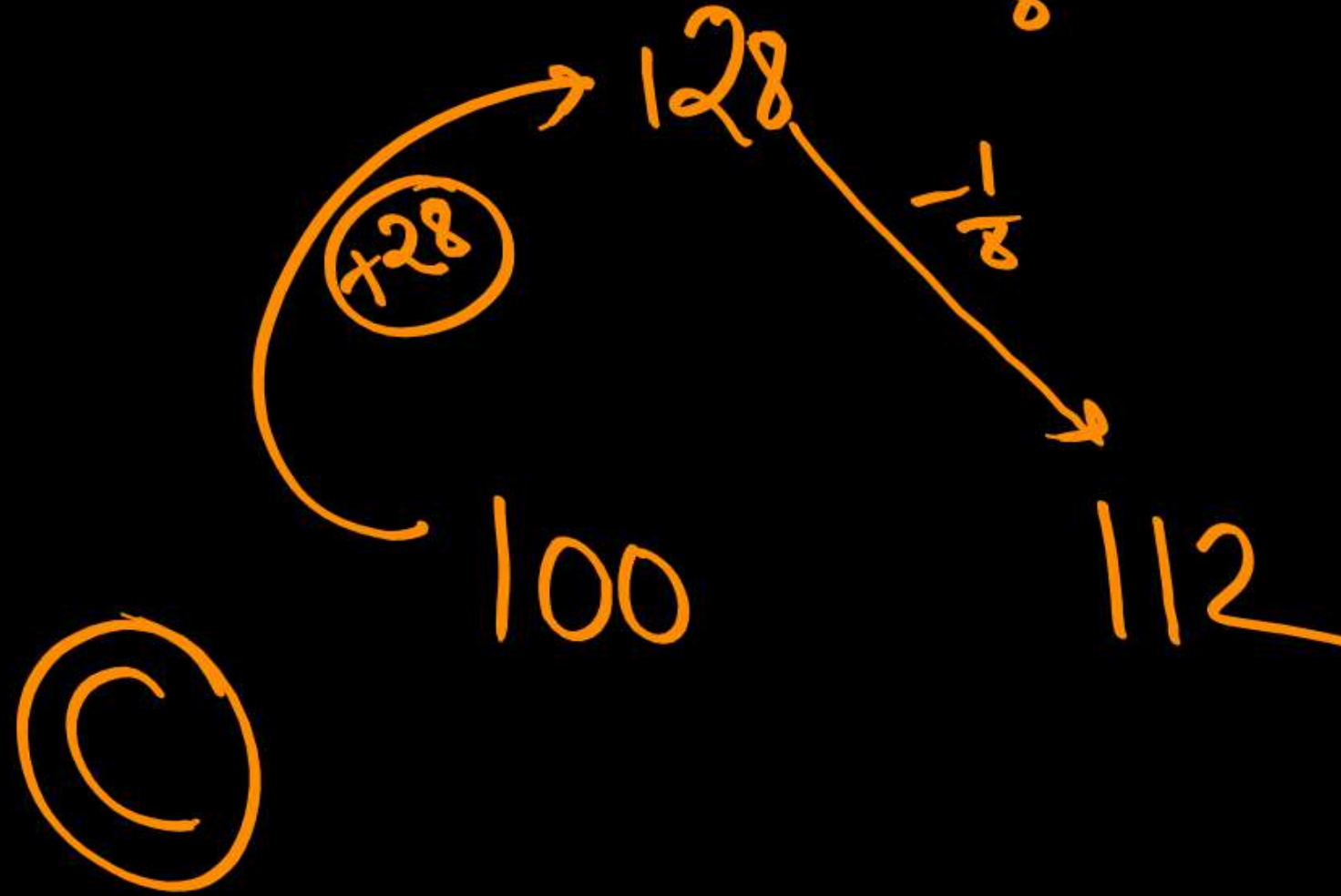
After allowing a discount of **12.5%**, profit is 12%
markup% = ?

(a) 37.5

(b) 32.84

☒ (c) 28

(d) 33.33



Profit is $16\frac{2}{3}\%$ and discount $7\frac{1}{7}\%$. Markup% = ?

$$\frac{1}{14}$$

(a) $36\frac{1}{9}$

(b) $24\frac{1}{3}$

(c) 25.6

(d) 26.5



$$\begin{aligned} & \frac{13}{14} - \frac{7}{63} = \frac{49}{39} + 10 \\ & \frac{13}{14} - \frac{7}{63} = \frac{49}{39} + 10 \\ & \frac{13}{14} - \frac{7}{63} = \frac{49}{39} + 10 \\ & \frac{13}{14} - \frac{7}{63} = \frac{49}{39} + 10 \end{aligned}$$

Simplification (सरलीकरण)

- VBODMAS सबसे Important Concept

$$96 - (42 \div 7 \times \overline{15 - 7} \div 2 \times 3)$$

$$96 - (6 \times \frac{8}{2} \times 3) = 24 \checkmark$$

- VBODMAS सबसे Important Concept

$$38 - (60 \div 5 \times 16 - 8 \div 2 \div 3)$$


22 Ans

- **Fraction की Mind में Calculation**

$$\rightarrow \frac{1}{3} + \frac{1}{4} = \frac{7}{12}$$

$$\rightarrow \frac{1}{2} - \frac{1}{5} = \frac{3}{10}$$

$$\rightarrow 3\frac{1}{3} + 5\frac{1}{4} = 8\frac{7}{12}$$

$$\rightarrow 10\frac{2}{3} - 4\frac{1}{5} = 6\frac{7}{15}$$

$$\rightarrow 3\frac{2}{5} + 4\frac{3}{4} = 8\frac{3}{20}$$

$$\rightarrow 6\frac{1}{4} - 3\frac{2}{5} = 2\frac{17}{20} \checkmark$$

- **Fraction की Mind में Calculation**

$$\checkmark 11\frac{1}{2} + \checkmark 17\frac{3}{4} - \checkmark 5\frac{1}{5} - \checkmark 2\frac{1}{10} = ?$$

$$21\frac{19}{20}$$

- **Fraction की Mind में Calculation**

$$99\frac{1}{7} + 99\frac{2}{7} + 99\frac{3}{7} + \dots 99\frac{6}{7} = ?$$

$$99 \times 6 + \left(\frac{1}{7} + \frac{2}{7} + \dots + \frac{6}{7} \right)$$

$$594 + 3$$

$$597$$

- **Fraction की Mind में Calculation**

$$99\frac{1}{9} + 99\frac{2}{9} + 99\frac{3}{9} + 99\frac{4}{9} + \dots 99\frac{8}{9} = ?$$

• $\frac{a}{b} \times \frac{c}{d}$ Rule

$$\frac{95}{5} \times \frac{4}{19} = 4$$

- $\frac{a}{b} \times \frac{c}{d}$ Rule

$$\frac{\cancel{2}7\cancel{3}^{\cancel{3}+7}}{\cancel{3}} \times \frac{4}{\cancel{13}} = 28$$

• $\frac{a}{b} \div \frac{c}{d}$ Rule

$\frac{9}{4} \div \frac{45}{12} = \frac{3}{5}$

- $\frac{a}{b} \div \frac{c}{d}$ **Rule**

$$\frac{126}{4} \div \frac{9}{12} = 42$$

Handwritten orange annotations: A diagonal line crosses through the entire expression. The number 14 is written above the 126. The number 3 is written below the 12. The 9 and 4 are also crossed out.

- $\frac{a}{b} \div \frac{c}{d}$ **Rule**

$$\frac{\overset{3}{\cancel{327}}}{\cancel{3}} \div \frac{\cancel{109}}{\cancel{12}} = 12$$

4

- **Numbers का Algebra से Connection**

$$\frac{(273+116)^2 - (273-116)^2}{2(273 \times 116)}$$

$$\frac{(a+b)^2 - (a-b)^2}{2 \times a \times b} = \frac{4ab}{2ab} = 2$$

- **Numbers का Algebra से Connection**

$$\frac{(317 + 26)^2 - (317 - 26)^2}{2(317 \times 26)}$$

2

- **Numbers का Algebra से Connection**

$$\frac{(40.7) \times (40.7) \times (40.7) + 1}{(40.7) \times (40.7) - (40.7) + 1} = ?$$

$$\frac{a^3 + 1^3}{a^2 - ax + 1^2} = a + 1 = 40.7 + 1 = 41.7$$

- Numbers का Algebra से Connection

$$N = 12345^2 + 12345 + 12346, \sqrt{N} = ?$$

$$12345^2 + 12345 + 12345 + 1$$

$$12345^2 + 2 \times 12345 \times 1 + 1^2$$

$$N = (12345 + 1)^2$$

$$\sqrt{N} = 12346$$

Correlation Technique

$$\sqrt{\left(1111 \dots 100 \text{ times}\right) - \left(222 \dots 50 \text{ times}\right)} = ?$$

Note: The original image contains a handwritten 'x2' below the first term and a handwritten 'x2' below the second term, which are crossed out. The correct calculation is $\sqrt{11 - 2} = \sqrt{9} = 3$.

(A) (111...100 times)

(B) (111...50 times)

(C) (333...100 times)

(D) (333...50 times) ✓

(D)

$$\sqrt{11 - 2} = \sqrt{9} = 3$$

- **Special Series**

$$\frac{(2-1)(2+1)(2^2+1)(2^4+1)\dots(2^{1024}+1)}{2-1} = ?$$

$$\begin{array}{r} 2^{2048} \\ - 1 \\ \hline 1 \end{array}$$

- **Special Series**

$$(3 + 1) (3^2 + 1) (3^4 + 1) \dots (3^{16} + 1) = ?$$

$$\frac{3^{32} - 1}{3 - 1} = \frac{3^{32} - 1}{2}$$

- **Special Series**

$$\frac{(6-1)(6+1)(6^2+1)(6^4+1) \dots (6^{64}+1)}{(6-1)} = ?$$

$$\frac{6^{128} - 1}{5}$$

- Step Cutting Approach (Visualisation)

$$7\frac{1}{3} \div 2\frac{1}{2} \text{ of } 1\frac{3}{5} - \left(\frac{3}{8} + \frac{1}{7} \times 1\frac{3}{4} \right) - \frac{5}{24} = ?$$

$$\left(\frac{11}{6} - \frac{5}{8} \right) - \frac{5}{24}$$

$$\frac{24}{24} = 1$$

- Fix Pattern का Smart Approach

1. $a + \frac{1}{b + \frac{1}{c + \frac{1}{d}}} = \frac{43}{5}$. Find $a + b + c + d$.

$$8 + \frac{1}{1 + \frac{1}{1 + \frac{1}{2}}}$$

$$5 \overline{)43} \begin{matrix} 8 \\ \underline{40} \end{matrix} \quad 8 \checkmark$$

$$3 \overline{)5} \begin{matrix} 1 \\ \underline{3} \end{matrix} \quad 1 \checkmark$$

$$2 \overline{)3} \begin{matrix} 1 \\ \underline{2} \end{matrix} \quad 1 \checkmark$$

$$8 + \frac{1}{1 + \frac{1}{1 + \frac{1}{2}}}$$

Type - 1: (+ का sign हो और आगे पीछे 1 हो)

$$\begin{aligned} &\checkmark 1 + \frac{1}{1} = ? \\ &\checkmark 1 + \frac{1}{1} \\ &\checkmark 1 + \frac{1}{1} \\ &\checkmark 1 + \frac{1}{1} \\ &\checkmark 1 + \frac{1}{1} \\ &\checkmark 1 + \frac{1}{5} \end{aligned}$$

$$\underline{1} \quad \underline{5} \quad \underline{6} \quad \underline{11} \quad \underline{17} \quad \underline{28} \quad \underline{45} = \frac{45}{28}$$

Type – 1: (+ का sign हो और आगे पीछे 1 हो)

$$1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{7}}}}} = ?$$

$$\underline{1} \quad \underline{7} \quad \underline{8} \quad \underline{15} \quad \underline{23} \quad \underline{38} \quad \underline{61} \quad \underline{61}$$
$$\underline{38}$$

Type - 2: (जब $\pm$ दोनों signs हो हो और आगे पीछे 1 हो)

$$\checkmark 1 + \frac{1}{1} = ?$$

$$\checkmark 1 - \frac{1}{1}$$

$$\checkmark 1 + \frac{1}{1}$$

$$\checkmark 1 + \frac{5}{6}$$

$$\underline{15} \quad \underline{6} \quad \underline{11} \quad \underline{17.6} \quad \underline{23}$$

$$\left(\frac{23}{6} \right)$$

Type – 2: (जब $\pm$ दोनों signs हो हो और आगे पीछे 1 हो)

$$1 + \frac{1}{1 - \frac{1}{1 + \frac{1}{1 + \frac{3}{4}}}} = ?$$

$$\underline{3} \quad \underline{4} \quad \underline{7} \quad \underline{11} \quad \underline{4} \quad \underline{15} = \frac{15}{4}$$

Type – 3: (जब न आगे 1 हो और न पीछे 1 हो)

$$\begin{array}{r} 3 + \frac{1}{2} = ? \\ 2 + \frac{2}{3} \\ 3 + \frac{1}{2} \end{array}$$

1 2 7 18 61

$$\left(\frac{61}{18} \right)$$

आगे वाला आगे से
पीछे वाला पीछे से