

Mixed Questions

1. Bottle 1 contains a mixture of milk and water in 7:2 and Bottle 2 contains a mixture of milk and water in 9:4. In what ratio of volumes should the liquids in Bottle 1 and Bottle 2 be combined to obtain a mixture of milk and water in 3:1?

- A. 27:14 B. 27:13 C. 27:16 D. 27:18

2. Out of the shirts produced in a factory, 15% are defective, while 20% of rest are sold in the domestic market. If the remaining 8840 shirts are left for exports, then the number of shirts produced in the factory is

- A. 13600 B. 13000 C. 13400 D. 14000

3. If 738A6A is divisible by 11, then the value of A is

- A. 6 B. 9 C. 3 D. 4

4. Excluding stoppages, the speed of a bus is 80 kmph and including stoppages, it is 60 kmph. For how many minutes does the bus stop per hour?

- A. 12 B. 15 C. 18 D. 20

5. If a train runs with the speed of 48 kmph, it reaches its destination late by 12 minutes. However, if its speed is 64 kmph it is late by 3 minutes only. The right time to cover its journey (in minutes) is:

- A. 24 B. 18 C. 20 D. 22

6. The sum of income of A, B, C is Rs. 30000. A, B, and C spend 75%, 70% and 62% of their income. If their savings are in ratio 20 : 21 : 19. Then what are their salaries?

- A. 12000, 10500, 7500
B. 12000, 10000, 8000
C. 10000, 12000, 8000
D. 8000, 16000, 6000

7. A does 80% of a work in 20 days. He then calls in B and they together finish the remaining work in 3 days. How long B alone would take to do the whole work?

- A. 23 days
B. 37 days
C. 37.5 days
D. 40 days
E. None of these

8. There were 8 participants in challenge of Shooting and the average score was 87. The winner got 2 more score than the first runner up. Average of rest 6 participants is 85. What are the scores of winner and 1st runner up?

A. 94, 92

B. 90, 92

C. 94, 96

D. 88, 90

9. The profit percentage on the three articles A, B and C is 10%, 20% and 25% and the ratio of the cost prices is 1 : 2 : 4. Also the ratio of number of articles sold of A, B and C is 2 : 5 : 2, then the overall profit percentage is.

A. 21%

B. 23%

C. 19%

D. 24%

10. The difference between compound interest and simple interest on an amount of Rs. 15,000 for 2 years is Rs. 96. What is the rate of interest per annum?

A.8

B.10

C.12

D. Cannot be determined E. NOT

11. Statements:

Some additions are subtractions.

No subtraction is multiplication.

All multiplications are divisions

Conclusions:

Some divisions are additions

Some multiplications are additions

No division is addition

A. None follows

B. Only I follows

C. Only II follows

D. Only either I or III follows

E. Only III follows

12. Statements:

All poles are fans.

All fans are stands.

Some stands are lines.

Some lines are boxes.

Conclusions:

Some boxes are poles.

Some fans are boxes.

Some lines are poles.

Some lines are fans.

- A. All not follows
- B. Only I and II not follow
- C. Only II and IV not follow
- D. Only III and IV not follow
- E. Only I, II and IV not follow

13. Ajay walks 24 km towards East and turns to right hand side and takes a drive of another 10 km. He then turning to his right (drives towards West) another 10 km. He then turns to his left & walks another 8 km. After that, he turns to his right & travels 14 km. How far is he from his initial point & in which direction?

- A. 20 km East
- B. 18 km south
- C. 16 km West
- D. 10 km South
- E. None of these

14. If $A + B$ means A is the mother of B; $A - B$ means A is the brother B; $A \% B$ means A is the father of B and $A \times B$ means A is the sister of B, which of the following shows that P is the maternal uncle of Q?

- A. $Q - N + M \times P$ B. $P + S \times N - Q$ C. $P - M + N \times Q$ D. $Q - S \% P$

15. 10, 11, 13, 21, 69, ?

- A. 384 B. 490 C. 453 D. 390

16. 3, 5, 14, _____, 107

- A. 42 B. 28 C. 30 D. 16

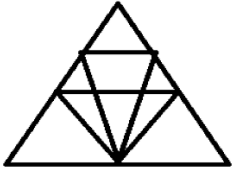
17. Position of Atul in a row is 26th from the right side of the row. He is sitting 38th from the left side of the row. Find out the total number of people in the row.

- A. 62 B. 63 C. 64 D. 65

18. Wine is related to Grapes in the same way as Vodka is related to

- A. Flour B. Oranges C. Potatoes D. Apples

19. Find the number of triangle in the given figure.



A. 12

B. 18

C. 22

D. 26

20. A man pointing to a photograph says, “The lady in the photograph is my nephew’s maternal grandmother.” How is the lady in the photograph related to the man’s sister who has no other sister?

A. Mother

B. Cousin

C. Mother-in-law

D. Sister-in-law

MIXED Question - 1

1) Bottle-1 : $\frac{7x}{9}, \frac{2x}{9}$

2) Bottle-2 : $\frac{9y}{13}, \frac{4y}{13}$

$$\text{Total} = \left(\frac{7x}{9} + \frac{9y}{13} \right), \left(\frac{2x}{9} + \frac{4y}{13} \right)$$

$$\therefore \frac{7x}{9} + \frac{9y}{13} = 3 \left(\frac{2x}{9} + \frac{4y}{13} \right)$$

$$\Rightarrow \frac{91x + 81y}{9 \times 13} = \frac{3(26x + 36y)}{9 \times 13}$$

$$\Rightarrow 91x + 81y = 78x + 108y$$

$$\Rightarrow 13x = 27y$$

$$\therefore \frac{x}{y} = \frac{27}{13}$$

Option: B) 27:13

2) Produced = x

$$\left(\frac{x \times \overset{17}{85}}{100} \right) \times \frac{\overset{4}{80}}{100} = 8840$$

$$\therefore x = \frac{\overset{130}{2210} \times 100}{17 \times 4} = 13000$$

Option: B) 13000

3) Divisible by 11 if: (sum of odd positions) -
(sum of even positions)
is divisible by 11

$$\therefore (- (2A + 3) + 20) \text{ divisible by } 11$$

$$\therefore A = 9$$

Option: B) 9

4] Bus cover 60 km in 80 kmph speed

$$\therefore \text{Moving time} = \frac{60}{80} \text{ h} = \frac{3}{4} \text{ h} = 45 \text{ min}$$

$$\therefore \text{Stops} = 15 \text{ min}$$

\therefore Option: B) 15

5]

$$a) \frac{d}{48} = t + \frac{1}{5}$$

$$b) \frac{d}{64} = t + \frac{1}{20}$$

$$\Rightarrow 48(t + \frac{1}{5}) = 64(t + \frac{1}{20})$$

$$\Rightarrow 3t + \frac{3}{5} = 4t + \frac{4}{20}$$

$$\Rightarrow 0t = \frac{3}{5} - \frac{1}{5} = \frac{2}{5} = 24 \text{ mins}$$

\therefore Option: A) 24

6] A, B and C savings = 25%, 30% and 38%

$$A \Rightarrow \frac{20x}{60} = 25\%$$

$$\therefore 100\% = \frac{20x}{60} \times \frac{100}{25} = \frac{80x}{60}$$

$$B \rightarrow \frac{21x}{60} = 30\%$$

$$\therefore 100\% = \frac{21x}{60} \times \frac{100}{30} = \frac{70x}{60}$$

$$C \rightarrow \frac{19x}{60} = 38\%$$

$$\therefore 100\% = \frac{19x}{60} \times \frac{100}{38} = \frac{50x}{60}$$

$$\therefore \frac{200x}{60} = 30000$$

$$\therefore 2x = 18000$$

$$\therefore x = 9000$$

$$A = \frac{8}{6} \times 9000^{1500} = 12000$$

$$B = \frac{7}{6} \times 9000 = 10500$$

$$C = \frac{5}{6} \times 9000 = 7500$$

\therefore Option: A) 12000, 10500, 7500

$$\begin{array}{l|l} \boxed{7} & A \rightarrow 25 \text{ days} \\ & A \rightarrow \text{one day} \rightarrow \frac{1}{25} \end{array} \quad \left| \quad \begin{array}{l} A+B \rightarrow 15 \text{ days} \\ A+B \rightarrow 1 \text{ day} \rightarrow \frac{1}{15} \end{array} \right.$$

$$\therefore B \rightarrow 1 \text{ day} \rightarrow \frac{1}{15} - \frac{1}{25} = \frac{5-3}{75} = \frac{2}{75}$$

$$\therefore B \rightarrow \frac{75}{2} \text{ days} = 37.5 \text{ days}$$

\therefore Option: c) 37.5 day

$$\boxed{8} \quad \text{Total} = 87 \times 8 = 696$$

$$\text{Total (remaining 6)} = 85 \times 6 = 510$$

$$\therefore \text{Total of 1st and 2nd} = 696 - 510 = 186$$

$$\therefore (x+2) + x = 186$$

$$\therefore x = \frac{184}{2} = 92$$

$$\therefore 94 \text{ and } 92$$

\therefore Option: A) 94, 92

$$\boxed{9} \quad \text{Cost Per unit} \Rightarrow x, 2x, 4x$$

$$\text{Cost of total unit} \Rightarrow 2x, 10x, 8x$$

$$\text{Profit} \Rightarrow 0.2x, 2x, 2x$$

~~2.000~~

$$\text{Overall profit} = \frac{0.2x + 2x + 2x}{2x + 10x + 8x} \times 100$$

$$= \frac{4.2x}{20x} \times 100$$

$$= 4.2 \times 5$$

$$= 21\%$$

\therefore Option: A) 21%

10

$$- P\left(\frac{2r}{100}\right) + P\left(1 + \frac{r}{100}\right)^2 - P = 96$$

$$\left(1 + \frac{r}{100}\right)^2 - \frac{2r}{100} - 1 = \frac{96}{15000}$$

$$\Rightarrow \left(\frac{100+r}{100}\right)^2 - \frac{2r}{100} - 1 = \frac{96}{15000}$$

$$\Rightarrow \cancel{(1)^2} + \cancel{\left(\frac{r}{100}\right)^2} + \cancel{\frac{2r}{100}} - \cancel{\frac{2r}{100}} - \cancel{1} = \frac{96}{15000}$$

$$\Rightarrow \frac{r^2}{10000} = \frac{96}{15000}$$

$$\Rightarrow r^2 = \frac{960}{15} = 64$$

$$\Rightarrow r = 8$$

\therefore Option: A) 8

11

Statements:

Some additions are subtractions.

No subtraction is multiplication.

All multiplications are divisions.

Conclusions:

Some divisions are additions.

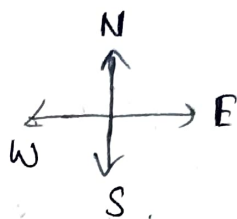
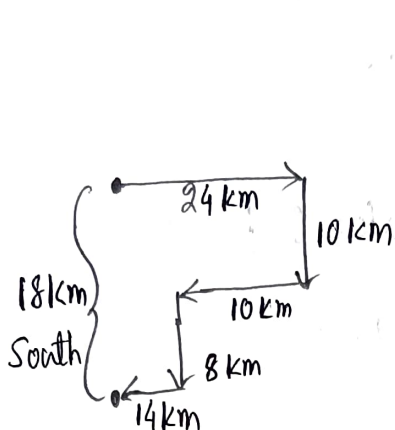
Some multiplications are additions.

No division is addition.

Option: E) Only III follows

12 A) All not follows

13



Option: B) 18 km south

14 $A+B \rightarrow A$ mother
 $A-B \rightarrow A$ brother
 $A \% B \rightarrow A$ father
 $A \times B \rightarrow A$ sister

$P \leftarrow Q$ uncle

Option: C) $P-M+N \times Q$

15 10 11 13 21 69 ? (453)

$\xleftrightarrow{1}$ $\xleftrightarrow{2}$ $\xleftrightarrow{8}$ $\xleftrightarrow{48}$ $\xleftrightarrow{384}$

1×2 \uparrow 2×4 \uparrow 8×6 \uparrow 48×8

Option: C) 453

16 3 5 14 (30 28) 107

$\xleftrightarrow{2}$ $\xleftrightarrow{9}$ $\xleftrightarrow{28}$ $\xleftrightarrow{65}$

$\xleftrightarrow{7}$ $\xleftrightarrow{19}$ $\xleftrightarrow{16}$ $\xleftrightarrow{77}$

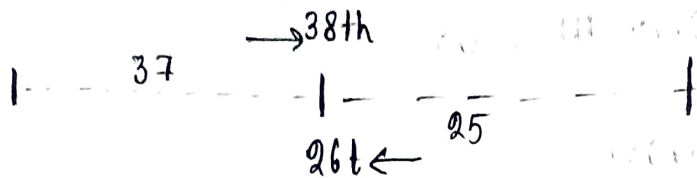
$\xleftrightarrow{5}$ $\xleftrightarrow{7}$ $\xleftrightarrow{14}$ $\xleftrightarrow{79}$

$3 \times 1 + 1^2 = 5$
 $5 \times 2 + 2^2 = 14$
 $14 \times 3 + 3^2 = 45$

~~$2 \times 3 + 1 = 7$~~
 ~~$2 \times 7 + 2 = 16$~~

$2 \times 28 + 2 = 58$
 $2 \times 10 + 3 = 23$

17]



$$\therefore \text{Total people} = 37 + 25 + 1$$

$$= 63$$

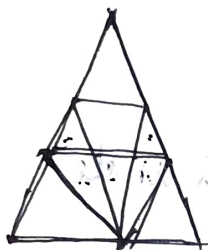
Option: b) 63

18]

Wine : Grapes :: Vodka : Potatoes

Option: c) Potatoes

19]



$$3 + 3 + 3 + 3 = 12$$

Option: b) 18

20]

A) Mother