

Banking Daily Quiz Blog - July 8



1. **Directions:** In a city 'X', there are 240 users who use three different types of vehicles i.e. Bike, Car and Truck. The number of users of all the three vehicles is 2.5% of the total number of users.

The number of users of Car and Truck both are 36 more than the Users of only Bikes. The number of users of Car and Bike both is equal to the number of users of Truck and Bike both. The number of users of Car and Bike both is half the number of users of only Bike and also the number of users of Truck only is 10 less than the number of users of only Bike. The number of users of only bike is 34.

- A. **Find the difference between the average number of users of only Bike and only truck and the average of only Bike and the users of all type of vehicles.**

A 2

B 6

C 8

D 4

E None of these

Solution

The users of all the three vehicles $(y) = 2.5\%$ of $240 = 6$

The number of users of only Truck = Number of users of only Bike - 10 =
 $34 - 10 = 24$

The number of users of Car and Truck both = The number of users of
Truck and Bike both = Half of the number of users of only Bike

\therefore The number of users of Car and Truck both = The number of users of
Truck and Bike both = $\frac{34}{2} = 17$

The number of users of Car and Truck both = The number of users of only
Bike + 36 = $34 + 36 = 70$

The number of users of only Car (x) = $240 - (70 + 24 + 34 + 17 + 17 + 6)$
 $= 72$

The average number of users of only Bike and only truck = $\frac{34+24}{2} = 29$

The average of only Bike and the users of all type of vehicles = $\frac{34+6}{2} = 20$

The required difference = $(29 - 20) = 9$

\therefore the answer will be none of these i.e. option E

B. Find the difference between the sum of users of only Bike and only Truck and the users of Car and truck both.

A 10

B 13

C 12

D 14

E 16

Solution

The users of all the three vehicles (y) = 2.5% of 240 = 6

The number of users of only Truck = Number of users of only Bike - 10 =
34 - 10 = 24

The number of users of Car and Truck both = The number of users of
Truck and Bike both = Half of the number of users of only Bike

∴ The number of users of Car and Truck both = The number of users of
Truck and Bike both = $\frac{34}{2} = 17$

The number of users of Car and Truck both = The number of users of only
Bike + 36 = 34 + 36 = 70

The number of users of only Car (x) = 240 - (70 + 24 + 34 + 17 + 17 + 6)
= 72

The sum of users of only Bike and only Truck = 34 + 24 = 58

The users of Car and truck both = 70

The required difference = (70 - 58) = 12

C. Find the ratio of the number of users of only Car and only Truck.

A 2 : 3

B 3 : 1

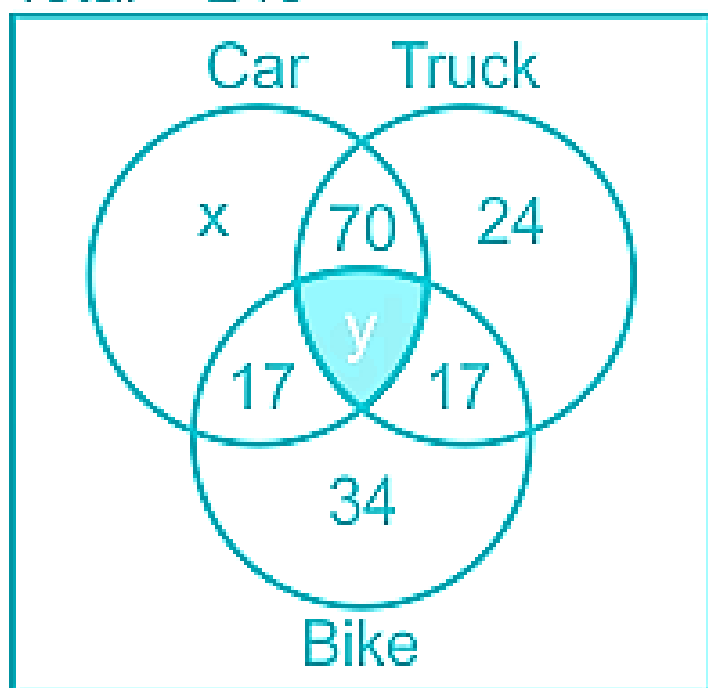
C 3 : 2

D 4 : 1

E Can't be determined

Solution

Total = 240



The users of all the three vehicles (y) = 2.5% of $240 = 6$

The number of users of only Truck = Number of users of Bike only - $10 = 34 - 10 = 24$

The number of users of Car and Truck both = The number of users of Truck and Bike both = Half of the number of users of only Bike

∴ The number of users of Car and Truck both = The number of users of Truck and Bike both = $\frac{34}{2} = 17$

The number of users of Car and Truck both = The number of users of only Bike + 36 = 34 + 36 = 70

The number of users of only Car (x) = 240 - (70 + 24 + 34 + 17 + 17 + 6) = 72

Required ratio = 72 : 24 = 3 : 1

D. The number of users of only truck is approximately what percent of the users of both Car and Truck?

A 34%

B 36%

C 37%

D 40%

E 42%

Solution

The users of all the three vehicles (y) = 2.5% of 240 = 6

The number of users of only Truck = Number of users of only Bike - 10 =
 $34 - 10 = 24$

The number of users of Car and Truck both = The number of users of
Truck and Bike both = Half of the number of users of only Bike

∴ The number of users of Car and Truck both = The number of users of
Truck and Bike both = $\frac{34}{2} = 17$

The number of users of Car and Truck both = The number of users of only
Bike + 36 = $34 + 36 = 70$

The number of users of only Car (x) = $240 - (70 + 24 + 34 + 17 + 17 + 6)$
 $= 72$

The number of users of only truck = 24

the users of both Car and Truck = 70

Required percentage = $\frac{24}{70} \times 100 = 34.28\%$ or 34% (approximately)

E. The number of users of only truck is what percent more than the number of users who uses all the type of vehicles?

A 150%

B 200%

C 250%

D**300%****E**

None of these

Solution

The users of all the three vehicles $(y) = 2.5\%$ of $240 = 6$

The number of users of only Truck = Number of users of only Bike - $10 = 34 - 10 = 24$

The number of users of Car and Truck both = The number of users of Truck and Bike both = Half of the number of users of only Bike

\therefore The number of users of Car and Truck both = The number of users of Truck and Bike both = $\frac{34}{2} = 17$

The number of users of Car and Truck both = The number of users of only Bike + $36 = 34 + 36 = 70$

The number of users of only Car $(x) = 240 - (70 + 24 + 34 + 17 + 17 + 6) = 72$

The number of users of only Truck = 24

The number of users of all the type of vehicles = 6

Required percentage = $\frac{24-6}{6} \times 100 = 300\%$

2. A does half of the work in 36 days and B does $\frac{1}{4}$ th of the same work in 12 days. With the help of C, they together complete the work is completed in 24 days. In how many days C alone can complete the work?

A 152 days

B 120 days

C 136 days

D 144 days

E 156 days

Solution

Given

A does $\frac{1}{2}$ work in 36 days

B does $\frac{1}{4}$ th of the same work in 12 days

Together complete the work is completed in 24 days

FORMULA USED :

$$\frac{1}{A} + \frac{1}{B} = \frac{A+B}{A.B}$$

CALCULATION :

⇒ A will do the complete work in $36 \times 2 = 72$ days

⇒ Efficiency of A = $\frac{1}{72}$

⇒ B will do the complete work in $12 \times 4 = 48$ days

⇒ Efficiency of B = $\frac{1}{48}$ days

⇒ Efficiency of A, B and C together = $\frac{1}{24}$

⇒ Efficiency of C = $\frac{1}{24} - \frac{1}{72} - \frac{1}{48}$

⇒ Efficiency of C = $\frac{1}{144}$

∴ C alone can complete the whole work in 144 days

3. A person bought a watch at a 20% discount. He sold the watch to his friend for Rs. 2700 and earns a profit of 12.5%. Find the discount offered on the watch.

A Rs. 600

B Rs. 800

C Rs. 1000

D Rs. 1200

E Rs. 400

Solution

Here

$$\text{Profit} = 12.5\% = \frac{1}{8}$$

$$\text{Let CP} = 8x \text{ and SP} = 9x$$

$$\text{Selling price for Person} = 2700$$

$$\Rightarrow 9x = 2700$$

$$\Rightarrow x = 300$$

$$\therefore \text{CP for Person} = 8x = 8 \times 300 = 2400$$

Let original price of watch = W

He gets discount of 20%

$$\therefore W \times 80\% = 2400$$

$$\Rightarrow W \times \frac{80}{100} = 2400$$

$$\Rightarrow W = 3000$$

\therefore Original price of watch = $W = 3000$

\therefore The discount offered on the watch = $3000 \times 20\% = 3000 \times \frac{20}{100} = \text{Rs.}$
600

4. The speed of a car and a train are in the ratio of 4 : 3 while running in an opposite direction. If the total distance travelled by them is 1260 km, then find the speed of the car.

A 44 km/hr

B 48 km/hr

C 36 km/hr

D 52 km/hr

E Cannot be determined

Solution

We have, $Speed = \frac{Distance}{Time}$

In the question, the time in which the distance is travelled is not given.

Hence, the answer to this question cannot be determined.

5. 50 men and 60 women can do a piece of work in 5 days, 30 men and 20 women can do the same work in 9 days. Find the time in which 4 men and 6 women will do the same work.

A 45 days

B 40 days

C 60 days

D 36 days

E None of these

Solution

Given:

$$50M + 60W = 5 \quad (1)$$

$$30M + 20W = 9 \quad (2)$$

As work done in both the case is same, equating both the cases:

$$250M + 300W = 270M + 180W$$

$$\Rightarrow 120W = 20M$$

$$\Rightarrow 6W = M \text{ (3)}$$

$$\text{Now, Total work} = 250M + 300W = 270M + 180W$$

Putting the value of M in equation (1)

$$\text{Total work} = 250M + 300W$$

$$\Rightarrow \text{Total work} = 250(6W) + 300W$$

$$\Rightarrow \text{Total work} = 1800W$$

Now,

$$4M + 6W = 4(6W) + 6W = 30W$$

$$\therefore \text{Number of days in which } 4M \text{ and } 6W \text{ can complete the work} = \frac{1800W}{30W} =$$

60 days

6. A and B invested Rs. 4000 and Rs. 6000 respectively in a business. C joins them after x months with the investment of Rs. 5000. If after one-year A receives Rs. 240 and C receives Rs. 100 as a share of profit, then find the value of x ?

A 4

B 5

C 6

D 8

E 9

Solution

We have, Profit = Investment \times Time

Given: C joins them after x months

\Rightarrow C invests for $(12 - x)$ months

Ratio of profit of A, B and C = $4000 \times 12 : 6000 \times 12 : 5000 \times (12 - x)$

\Rightarrow Ratio of profit of A, B and C = $48 : 72 : (60 - 5x)$

Let the profit of A, B and C be $48y$, $72y$, $(60 - 5x)y$ respectively.

According to question:

$$48y = 240$$

$$\Rightarrow y = 5$$

Now,

$$\text{Profit of C} = (60 - 5x)y = (60 - 5x)5 = 300 - 25x = 100$$

$$\Rightarrow 25x = 300 - 100$$

$$\Rightarrow 25x = 200$$

$$\Rightarrow x = 8 \text{ months}$$

