

Consagous Technologies Aptitude Questions, Answers With Explanations

Q1. A train overtakes two persons who are walking in the same direction in which the train is going, at the rate of 2 kmph and 4 kmph and passes them completely in 9 and 10 seconds respectively. The length of the train is:

- A. 45 m
- B. 50 m
- C. 54 m
- D. 72 m

ANS: B

Explanation:

$$2 \text{ kmph} = (2 \times 5 / 18) \text{ m/sec} = 5 / 9 \text{ m/sec.}$$

$$4 \text{ kmph} = (4 \times 5 / 18) \text{ m/sec} = 10 / 9 \text{ m/sec.}$$

Let the length of the train be x metres and its speed by y m/sec.

$$\text{Then, } (x / y - 5/9) = 9 \text{ and } (x/y - 10/9) = 10.$$

$$9y - 5 = x \text{ and } 10(9y - 10) = 9x$$

$$9y - x = 5 \text{ and } 90y - 9x = 100$$

on solving we get $x = 50$

Length of the train is 50 m

Q2. A man rows to a place 48 km distant and come back in 14 hours. He finds that he can row 4 km with the stream in the same time as 3 km against the stream. The rate of the stream is:

- A. 1 km/hr
- B. 1.5 km/hr
- C. 2 km/hr

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D. 2.5 km/hr

ANS: A

Explanation:

Suppose he move 4 km downstream in x hours. Then,

Speed downstream $= (4/x) \text{ km/hr}$

Speed up stream $= (3/x) \text{ km/hr}$

$48/4/x + 48(3/x) = 14$ or $x = 1/2$

So, speed downstream $= 8 \text{ km/hr}$, speed upstream $= 6 \text{ km/hr}$

Rate of the stream $= 1/2(8-6) \text{ km/hr} = 1 \text{ km/hr}$.

Q3. A pupil's marks were wrongly entered as 83 instead of 63. Due to that the average marks for the class got increased by half ($1/2$). The number of pupils in the class is:

A. 10

B. 20

C. 40

D. 73

ANS: C

Explanation:

Let there be x pupils in the class.

Total increase in marks $= (x * 1/2) = x/2$

Therefore $x/2 = (83-63) = x/2 = 20 = x = 40$

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Q4. A bag contains 6 black and 8 white balls. One ball is drawn at random. What is the probability that the ball drawn is white?

- A. $\frac{3}{4}$
- B. $\frac{4}{7}$
- C. $\frac{1}{8}$
- D. $\frac{3}{7}$

ANS: B

Explanation:

Let number of balls = $(6 + 8) = 14$.

Number of white balls = 8.

P (drawing a white ball) = $\frac{8}{14} = \frac{4}{7}$.

Q5. The salaries A, B, C are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed respectively in their salaries, then what will be new ratio of their salaries?

- A. 3 : 3 : 10
- B. 10 : 11 : 20
- C. 23 : 33 : 60-**Ans**
- D. Cannot be determined

ANS: C

Explanation:

Let $A = 2k$, $B = 3k$ and $C = 5k$.

A 's new salary = $\frac{115}{100}$ of $2k = \frac{115}{100} \times 2k = \frac{23k}{10}$

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$$B's \text{ new salary} = 110 / 100 \text{ of } 3k = 110 / 100 \times 3k = 33k/10$$

$$C's \text{ new salary} = 120 \text{ of } 5k = 120 \times 5k = 6k$$

$$\text{New ratio } 23k/10 : 33k/10 : 6k = 23 : 33 : 60$$

Q6. There were two rooms of students room A and room B. If 10 students from room A are transferred to room B then the no of students in both the room will be equal .If 20 students from room B are transferred to room A then the no. of students in room A will be double the no of students in room A. Then what are the no. of students in room A?

Q7. The time taken by boat to travel 4 meters downstream is 4 hours 48 min and that the upstream 4 hours .Find the speed of the boat in still water and the speed of the stream.

Q8. An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?

- A. 144°
- B. 150°
- C. 168°
- D. 180°

Explanation:

$$\text{Angle traced by the hour hand in 6 hours} = (360/12) \times 6^\circ = 180^\circ.$$

Q9. If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more. The actual distance travelled by him is:

- A. 50 km

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- B. 56 km
- C. 70 km
- D. 80 km

ANS: A

Explanation:

Let the actual distance travelled be x km.

$$\text{Then } x = x/10 + 20/14$$

$$14x = 10x + 200 \quad 4x = 200$$

$$x = 50 \text{ km.}$$

Q10. Three candidates contested an election and received 1136, 7636 and 11628 votes respectively. What percentage of the total votes did the winning candidate get?

- A. 57%
- B. 60%
- C. 65%
- D. 90%

Explanation:

$$\text{Total number of votes polled} = (1136 + 7636 + 11628) = 20400.$$

$$\text{Required percentage} = (11628 / 20400 \times 100) \% = 57\%.$$