Aptitude Logical Reasoning Time and Distance 2021 Competitive Exams Part 1

1. Express a speed of 36 kmph in meters per second?

A. 10 mps

B. 11 mps

C. 18 mps

D. 15 mps

Ans: A

Explanation:

$$36 \times \frac{5}{18}$$

$$= 10 \text{ mps}$$

2. Express 25 mps in kmph?

A. 20 kmph

B. 10 kmph

C. 90 kmph

D. None

Ans: C

Explanation:

$$25 \times \frac{18}{5}$$

$$= 90 \text{ kmph}$$

3. The speed of a train is 90 kmph. What is the distance covered by it in 10 minutes?

A. 15 kmph

B. 11 kmph

C. 14 kmph

D. 5 kmph

Ans: A

Explanation:

$$90 \times \frac{10}{60}$$

$$= 15 \text{ kmph}$$

4. A car covers a distance of 624 km in 6 $\frac{1}{2}$ hours. Find its speed?

A. 104 kmph

B. 141 kmph

C. 144 mph

D. 10.2 kmph

Ans: A

Explanation:

$$\frac{624}{6} = 104 \text{ kmph}$$

5. In what time will a railway train 60 m long moving at the rate of 36 kmph pass a telegraph post on its way?

A. 1 sec

B. 5 sec

C. 7 sec

D. 6 sec

Ans: D

Explanation:

$$\text{T} = \frac{60}{36} \times \frac{18}{5} = 6 \text{ sec .}$$

6. A train 240 m in length crosses a telegraph post in 16 seconds. The speed of the train is?

A. 51 kmph

B. 52 Kmph

C. 54 kmph

D. 55 kmph

Ans: C

Explanation:

$$s = \frac{240}{16} \times \frac{18}{5} = 54 \text{ kmph}$$

7. The speed of a car is 90 km in the first hour and 60 km in the second hour. What is the average speed of the car?

A. 71 kmph

B. 75 kmph

C. 31 kmph

D. 33 kmph

Ans: B

Explanation:

$$S = \frac{90 + 60}{2} = 75 \text{ kmph}$$

8. Walking with $\frac{4}{5}$ of my usual speed, I miss the bus by 5 minutes. What is my usual time?

A. 32 min

B. 33 min

C. 24 min

D. 20 min

Ans: D

Explanation:

Speed Ratio = $1 : \frac{4}{5} = 5 : 4$

Time Ratio = $4 : 51$

$= 20$

9. If a man walks to his office at $\frac{3}{4}$ of his usual rate, he reaches office $\frac{1}{3}$ of an hour late than usual. What is his usual time to reach office?

A. 1 hour

B. 2 hour

C. 3 hour

D. 4 hour

Ans: A

Explanation:

Speed Ratio = $1 : \frac{3}{4} = 4 : 3$

Time Ratio = 3 : 4

1 ... $\frac{1}{3}$

3 ...

= 1 hour

10. Walking $\frac{7}{6}$ of his usual rate, a boy reaches his school 4 min early. Find his usual time to reach the school?

A. 25 min

B. 26 min

C. 27 min

D. 28 min

Ans: D

Explanation:

Speed Ratio = $1 : \frac{7}{6} = 6.7$

Time Ratio = 7 : 6

1 ... 7

4 ...

= 28 min

11. Two cars cover the same distance at the speed of 60 and 64 kmps respectively. Find the distance travelled by them if the slower car takes 1 hour more than the faster car.

A. 906 km

B. 960 m

C. 960 km

D. 966 km

Ans: C

Explanation:

$60\,(x + 1) = 64x$

$x = 15$

$60 \times 16 = 960$ km

12. A man leaves a point P at 6 a. m. and reaches the point Q at 10 a. m. another man leaves the point give at 8 a. m. and reaches the point P at 12 noon. At what time do they meet?

A. 8 a. m.

B. 8 p. m.

C. 9 a. m.

D. 9 p. m.

Ans: C

Explanation:

9 a. m.

13. A thief goes away with a SANTRO car at a speed of 40 kmph. The theft has been discovered after half an hour and the owner sets off in a bike at 50 kmph when will the owner over take the thief from the start?

A. 2 hours

B. 2 hours 45 min

C. 2 hours 30 min

D. 2 hours 50 min

Ans: A

Explanation:

50

$D = 20$

$₹ = 50 - 40 = 10$

$T = \frac{20}{10} = 2$ hours

14. If I walk at 3 kmph, I miss the train by 2 min, if however, I walk at 4 kmph. I reach the station 2 min before the arrival of the train. How far do I walk to reach the station?

A. $\frac{4}{5}$ km

B. $\frac{5}{4}$ km

C. $\frac{6}{5}$ km

D. $\frac{3}{4}$ km

Ans: A

Explanation:

$$\frac{x}{3} - \frac{x}{4} = \frac{4}{60}$$

$$x = \frac{4}{5}\text{km}$$

15. Two trains each 250 m in length are running on the same parallel lines in opposite directions with the speed of 80 kmph and 70 kmph respectively. In what time will they cross each other completely?

A. 10 sec

B. 11 sec

C. 12 sec

D. 14 sec

Ans: C

Explanation:

$$D = 250m + 250m = 500m$$

$$₹ = 80 + 70 = 150 \times \frac{5}{18} = \frac{125}{3}$$

$$T = 500 \times \frac{3}{125} = 12 \text{ sec}$$

16. Two trains of equal length, running with the speeds of 60 and 40 kmph, take 50 seconds to cross each other while they are running in the same direction. What time will they take to cross each other if they are running in opposite directions?

A. 10 sec

B. 9 sec

C. 8 sec

D. 7 sec

Ans: A

Explanation:

$$₹ = 60 - 40 = 20 \times \frac{5}{18} = \frac{100}{18}$$

$$T = 50$$

$$D = 50 \times \frac{100}{18} = \frac{2500}{9}$$

$$₹ = 60 + 40 = 100 \times \frac{5}{18}$$

$$T = \frac{2500}{9} \times \frac{18}{500} = 10 \text{ sec}$$

17. If a train, travelling at a speed of 90 kmph, crosses a pole in 5 sec, then the length of train is?

A. 104 m

B. 125 m

C. 140 m

D. 152 m

Ans: B

Explanation:

$$D = 90 \times \frac{5}{18} = 5 = 125m$$

18. Two trains travelling in the same direction at 40 and 22 kmph completely pass off another in 1 minute. If the length of the first train is 125 m, what is the length of the second train?

A. 125 m

B. 150 m

C. 175 m

D. 185 m

Ans: C

Explanation:

$$₹ = 40 - 22 = 18 \times \frac{5}{18} = 5 \text{ mps}$$

$$T = 60 \text{ sec}$$

$$D = 5 \times 60 = 300m$$

125

$$175m$$

19. How many seconds will a train 100 meters long take to cross a bridge 150 meters long if the speed of the train is 36 kmph?

A. 18

B. 22

C. 25

D. 28

Ans: C

Explanation:

$$D = 100 + 150 = 250$$

$$S = 36 \times \frac{5}{18} = 10 \text{ mps}$$

$$T = \frac{250}{10} = 25 \text{ sec}$$

20. A train 100 meters long completely crosses a 300 meters long bridge in 45 seconds. What is the speed of the train is?

A. 32 kmph

B. 36 kmph

C. 40 kmph

D. 48 kmph

Ans: A

Explanation:

$$S = \frac{100 + 300}{45} = \frac{400}{45} \times \frac{18}{5} = 32$$