1. A person crosses a 600 m long street in 5 minutes. What is his speed in km per hour?

   3.6

   7.2

   8.4

   10

Answer: Option

Explanation:

$$\text{Speed} = \left(\frac{600}{5 \times 60}\right)\text{m/sec.}$$

= 2 m/sec.

Converting m/sec to km/hr (see important formulas section)

$$= \left(2 \times \frac{18}{5}\right)\text{km/hr}$$

= 7.2 km/hr.

2. An aeroplane covers a certain distance at a speed of 240 kmph in 5 hours. To cover the same distance in $1\frac{2}{3}$ hours, it must travel at a speed of:

   300 kmph

   360 kmph

   600 kmph

   720 kmph

Answer: Option

Explanation:

Distance = (240 x 5) = 1200 km.

Speed = Distance/Time

Speed = 1200/(5/3) km/hr. [We can write $1\frac{2}{3}$ hours as 5/3 hours]

$$\therefore \text{ Required speed} = \left(1200 \times \frac{3}{5}\right)\text{km/hr} = 720 \text{ km/hr.}$$

3. 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:

50 km

56 km

70 km

80 km

Answer: Option

Explanation:

Let the actual distance travelled be x km.

Then, $\frac{x}{10} = \frac{x + 20}{14}$

$\Rightarrow 14x = 10x + 200$

$\Rightarrow 4x = 200$

$\Rightarrow x = 50$ km.

4. A train can travel 50% faster than a car. Both start from point A at the same time and reach point B 75 kms away from A at the same time. On the way, however, the train lost about 12.5 minutes while stopping at the stations. The speed of the car is:

100 kmph

110 kmph

120 kmph

130 kmph

Answer: Option

Explanation:

Let speed of the car be x kmph.

Then, speed of the train $= \frac{150}{100}x = \left(\frac{3}{2}x\right)$ kmph.

$\therefore \frac{75}{x} - \frac{75}{(3/2)x} = \frac{125}{10 \times 60}$

$\Rightarrow \frac{75}{x} - \frac{50}{x} = \frac{5}{24}$

$\Rightarrow x = \left(\frac{25 \times 24}{5}\right) = 120$ kmph.

5. Excluding stoppages, the speed of a bus is 54 kmph and including stoppages, it is 45 kmph. For how many minutes does the bus stop per hour?

9

10

12

20

Answer: Option

Explanation:

Due to stoppages, it covers 9 km less.

Time taken to cover 9 km = $\left(\frac{9}{54} \times 60\right)$ min = 10 min.