EducationwithFun

Name: ____________________________ Date: ___________________

Motion and Time

Q1. The distance between two stations is 240 km. A train takes 4 hours to cover this distance. Calculate the speed of the train.

Ans. ____

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Q2. A simple pendulum takes 32 s to complete 20 oscillations. What is the time period of the pendulum?

Ans. ____

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Q3. Salma takes 15 minutes from her house to reach her school on a bicycle. If the bicycle has a speed of 2 m/s, calculate the distance between her house and the school.

Ans. ____

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Q4. When pendulum is said to have one complete oscillation?

Ans. ____

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Motion and Time

Q1. The distance between two stations is 240 km. A train takes 4 hours to cover this distance. Calculate the speed of the train.

Ans. Distance between two stations = 240 km

Time taken to cover this distance = 4 hours

$$\text{Speed} = \frac{\text{Distance}}{\text{Time Taken}} = \frac{240}{4} = 60 \text{ km/h}$$

Q2. A simple pendulum takes 32 s to complete 20 oscillations. What is the time period of the pendulum?

Ans. Number of oscillations = 20

Total time taken to complete 20 oscillations = 32 s

$$\text{Time period} = \frac{\text{Total time taken}}{\text{Number of oscillations}} = \frac{32}{20} = 1.6 \text{ s}$$

Q3. Salma takes 15 minutes from her house to reach her school on a bicycle. If the bicycle has a speed of 2 m/s, calculate the distance between her house and the school.

Ans. Time taken = 15 min = 15 x 60 = 900 seconds

Speed = 2 m/s

Distance = Speed x Time

= 2 x 900 = 1800 m = 1800/1000 = 1.8 km

Q4. When pendulum is said to have one complete oscillation?

Ans. The pendulum is said to have completed one oscillation when its bob, starting from its mean position B, moves to A, to C and back to B.