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Worksheet: Motion and Time

1. A car travels a distance of 120 kilometers in 3 hours. What is its speed in meters per second (m/s)?
2. What is non-uniform motion? Give one example.
3. 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.
4. What is a speedometer and what does it measure?
5. What is meant by periodic motion?
6. What is the SI unit of speed?
7. The distance between two stations is 240 km. A train takes 4 hours to cover this distance. Calculate the speed of the train.
8. The odometer of a car reads 57321.0 km when the clock shows the time 08:30 AM. What is the distance moved by the car, if at 08:50 AM, the odometer reading has changed to 57336.0 km? Calculate the speed of the car in km/min during this time. Express the speed in km/h also.
9. A car moves with a speed of 40 km/h for 15 minutes and then with a speed of 60 km/h for the next 15 minutes. The total distance covered by the car is:
10. Explain different types of motion with examples.
11. What is uniform motion? Give one example.
12. What does an odometer measure?
13. Name the instrument used to measure time in a laboratory.
14. Classify the following as motion along a straight line, circular or oscillatory motion: (i) Motion of your hands while running. (ii) Motion of a horse pulling a cart on a straight road. (iii) Motion of a child in a merry-go-round. (iv) Motion of a child on a see-saw. (v) Motion of the hammer of an electric bell. (vi) Motion of a train on a straight bridge.
15. A simple pendulum takes 32 s to complete 20 oscillations. What is the time period of the pendulum?
16. Which of the following are not correct? (i) The basic unit of time is second. (ii) Every object moves with a constant speed. (iii) Distances between two cities are measured in kilometres. (iv) The time period of a given pendulum is constant. (v) The speed of a train is expressed in m/h.