

## Assignment 8.1

## Science IX

1. An object has moved through a distance. Can it have zero displacement? If yes, support your answer with an example.
2. A farmer moves along the boundary of a square field of side 10 m in 40 s. What will be the magnitude of displacement of the farmer at the end of 2 minutes 20 seconds from his initial position?
3. Which of the following is true for displacement?
  - (a) It cannot be zero.
  - (b) Its magnitude is greater than the distance travelled by the object.
4. Distinguish between speed and velocity.
5. Under what condition(s) is the magnitude of average velocity of an object equal to its average speed?
6. What does the odometer of an automobile measure?
7. What does the path of an object look like when it is in uniform motion?
8. During an experiment, a signal from a spaceship reached the ground station in five minutes. What was the distance of the spaceship from the ground station? The signal travels at the speed of light, that is,  $3 \times 10^8 \text{ m s}^{-1}$ .