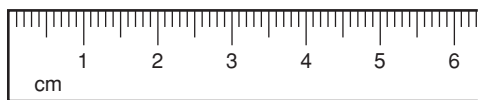


Chapter 1 Motion**Standards Practice**

- 1** Sophia says, "My school is 4 kilometers north and 3 kilometers west." What do you need to know to determine where Sophia's school is?

A Sophia's standard reference point
B the unit of measure she is using
C the size of Sophia's school
D the direction Sophia is moving

2



If you use the 4-cm mark as the standard reference point, what is the position of the 1-cm mark?

A +3 cm
B +4 cm
C -1 cm
D -3 cm

- 3** Juan needs to calculate the average speed of a cyclist on the way to school. What two measurements does Juan need to calculate the average speed?

A the object's mass and the total distance traveled
B the object's speed at every point along its path
C the total distance traveled and the total time elapsed
D the total time elapsed and the object's mass

- 4** Makayla ran 100 meters in 20 seconds. What was her average speed?

A 100 m
B 20 s
C 5.0 m/s
D 0.2 m/s

- 5** Kyle needs to determine the distance a car traveled given the car's average speed and the time it took the car to travel the distance. What equation should Kyle use to determine distance?

A $d = vt$
B $v = d/t$
C $d = t/v$
D $t = d/v$

- 6** After school, Jayden ran 1500 meters toward home for the first 8 minutes. He walked the last 500 meters to home. That took him another 12 minutes. What was Jayden's average speed?

A 8 m/min
B 10 m/min
C 12 m/min
D 20 m/min

Chapter 1 Motion

- 7** Haley's family drove 105 kilometers at an average speed of 42 km/hr. How long did it take them to reach their destination?

A 5 hours
B 3 and a half hours
C 6.7 hours
D 2 and a half hours





- 8** One Saturday morning, Jordan rode his bike for 2 hours at an average speed of 12 km/hr. How far did Jordan ride that morning?

A 2 km
B 6 km
C 12 km
D 24 km

- 9** Which is a description of velocity?

A 50 km/h
B 50 km/h west
C 50 km west
D 50 km

- 10** The arrows represent velocity vectors of four objects moving in the same direction. Which arrow represents the *fastest* speed?

A 
B 
C 
D 

- 11** An airplane that is flying at a constant speed is changing its velocity if it is

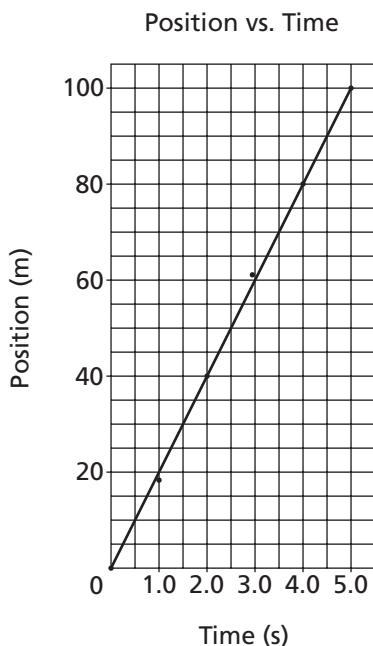
A flying north to south.
B flying in a curved path.
C flying away from the airport.
D flying east to west.

- 12** How is acceleration different from velocity?

A Acceleration does not include direction, while velocity does.
B Velocity is a vector quantity, but acceleration is not.
C Acceleration is the rate at which speed changes, while velocity is speed in a given direction.
D Velocity is measured in m/s^2 , and acceleration is measured in m/s .

- 13** Deana needs to determine the speed of a moving object by using the data on a position-versus-time graph. What can Deana do to determine the speed?

A add the figures on the horizontal axis
B multiply average speed times distance
C calculate the elapsed time
D calculate the slope of the line

Chapter 1 Motion**14**

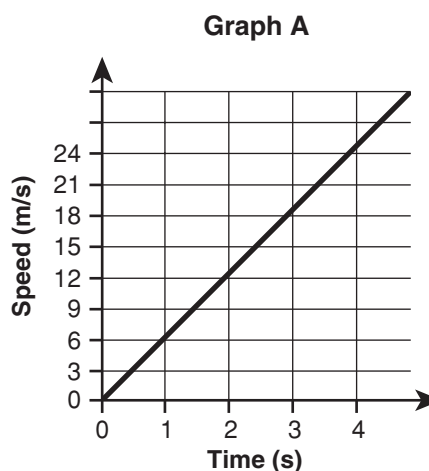
The graph shows the times and positions of a moving train. What is the position of the train after 2 seconds?

- A 20 m from the reference point
- B 40 m from the reference point
- C 60 m from the reference point
- D 80 m from the reference point

15

A student plots a speed-versus-time graph for a moving object. The slope of the line is zero. Which statement *best* describes the motion of the object?

- A The object moves at a constant speed.
- B The object's speed increases at a constant rate.
- C The object's speed decreases at a constant rate.
- D The object's speed equals zero.

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The graph describes the motion of an object. The slanted, straight line on the graph indicates that

- A the object is traveling at a constant speed.
- B the object is not accelerating.
- C the object is accelerating at a constant rate.
- D the object is accelerating at an ever increasing rate.