

## Motion and Energy ▪ Chapter 9 Pre-Assessment

Write the letter of the correct answer on the line at the left.

- \_\_\_\_\_ 1. Is a moving bus a good reference point from which to measure your position?
  - a. No, because it is often late.
  - b. No, because it is not a stationary object.
  - c. Yes, because it is very large.
  - d. Yes, because it can travel very far.
  
- \_\_\_\_\_ 2. To describe a friend's position with respect to you, you need to know
  - a. Your friend's distance from you.
  - b. The direction your friend is facing.
  - c. Your friend's distance and direction from you.
  - d. Your friend's distance from a nearby object.
  
- \_\_\_\_\_ 3. Two cars traveling in the same direction pass you at exactly the same time. The car that is going faster
  - a. moves farther in the same amount of time.
  - b. has more mass.
  - c. has the louder engine.
  - d. has less momentum.
  
- \_\_\_\_\_ 4. To describe an object's motion, you need to know its
 

a. position.	b. change in position.
c. distance.	d. change in position over time.

## Motion and Energy ▪ Section 9.1 Quiz

If the statement is true, write true. If it is false, change the underlined word or words.

- \_\_\_\_\_ 1. An object is in motion if its distance from another, stationary object is changing.
- \_\_\_\_\_ 2. An object is in motion if it changes position relative to distance.
- \_\_\_\_\_ 3. Distance is the length of a path between two points.
- \_\_\_\_\_ 4. Displacement is the length and direction of a straight line between starting and ending points.
- \_\_\_\_\_ 5. A vector has magnitude and velocity.

## Motion and Energy ▪ Section 9.2 Quiz

Fill in the blank to complete each statement.

1. To calculate speed you \_\_\_\_\_ distance over time.
2. The speed of most moving objects is not \_\_\_\_\_.
3. Velocity is speed in a given \_\_\_\_\_.
4. Changes in velocity may be due to changes in \_\_\_\_\_, changes in direction, or both.
5. You can calculate the slope of a line by dividing the \_\_\_\_\_ by the run.

## Motion and Energy ▪ Section 9.3 Quiz

If the statement is true, write true. If it is false, change the underlined word or words.

- |       |   |
|-------|---|
| _____ | 1. Acceleration refers to increasing speed, decreasing speed, or changing <u>direction</u> .                    |
| _____ | 2. A slowing down of speed is sometimes called <u>positive</u> acceleration.                                    |
| _____ | 3. To find acceleration subtract the <u>final</u> velocity from the <u>initial</u> velocity and divide by time. |
| _____ | 4. You can analyze the motion of an accelerating object using a <u>speed-versus-time</u> graph.                 |
| _____ | 5. You can analyze the motion of an accelerating object using a <u>distance-versus-time</u> graph.              |

**Motion and Energy** ▪ *Section 9.4 Quiz*

*Fill in the blank to complete each statement.*

1. \_\_\_\_\_ is done when an object is caused to move a certain distance.
2. The \_\_\_\_\_ energy of an object depends on both its mass and speed.
3. The \_\_\_\_\_ energy of an object depends on both shape and position.
4. An object's gravitational potential energy depends on its weight and on its \_\_\_\_\_ relative to a reference point.
5. According to the law of conservation of energy, energy cannot be created or \_\_\_\_\_.