

Student Name: _____

Date: _____

Period #: _____

Unit 1: Quiz 8
1-Dimensional Motion

Identify the choice that best completes the statement or answers the question. Write your response on the space provided.

____ 1. A train travels 6 meters in the 1st second of travel, another 6 meters in the 2nd second of travel, and 6 meters again during the 3rd second. Its acceleration is ____.

- a. 0 m/s^2
- b. 6 m/s^2
- c. 12 m/s^2
- d. 18 m/s^2

____ 2. A car starts from rest and after 7 seconds it is moving at 42 m/s. What is the car's average acceleration?

- a. 0.17 m/s^2
- b. 1.67 m/s^2
- c. 6 m/s^2
- d. 7 m/s^2

____ 3. As an object falls freely in a vacuum, its ____.

- a. velocity increases
- b. acceleration increases
- c. both (a) and (b)
- d. none of the above

____ 4. In the absence of air resistance, objects fall at constant ____.

- a. speed
- b. velocity
- c. acceleration
- d. distances each successive second

____ 5. A ball is thrown upwards and caught at the same height as it comes back down. In the absence of air resistance, the speed of the ball just before it is caught would be ____.

- a. less than the speed it had when thrown upwards
- b. more than the speed it had when thrown upwards
- c. the same speed it had when thrown upwards
- d. 0 m/s

____ 6. Suppose an object is in free fall. Each second, the object falls ____.

- a. the same distance as in the second before
- b. a larger distance than in the second before
- c. with the same instantaneous speed
- d. with the same average speed

____ 7. A ball tossed vertically upwards rises, reaches its highest point, and then falls back to its starting point. During this time the acceleration of the ball is always ____.

- a. in the direction of the motion
- b. opposite its velocity
- c. directed downward
- d. directed upward

____ 8. When a basketball player jumps, once the feet are off the floor, the jumper's acceleration ____.

- a. varies with body orientation
- b. depends on launch speed
- c. is usually greater for taller players
- d. is always equal to ***g***