

Name: \_\_\_\_\_

## Chapter 2 Test Review: A Few Extra Multiple Choice Problems

- 1) An observer recorded the following data for the motion of a car undergoing constant acceleration.

Time (s)	Speed (m/s)
3.0	4.0
5.0	7.0
6.0	8.5

What was the magnitude of the acceleration of the car?

- A)  $2.0 \text{ m/s}^2$                       B)  $4.5 \text{ m/s}^2$                       C)  $1.5 \text{ m/s}^2$                       D)  $1.3 \text{ m/s}^2$
- 2) How far will a brick starting from rest fall freely in 3.0 seconds?
- A) 88 m                              B) 15 m                              C) 44 m                              D) 29 m
- 3) A car increases its speed from 9.6 meters per second to 11.2 meters per second in 4.0 seconds. The average acceleration of the car during this 4.0-second interval is
- A)  $5.2 \text{ m/s}^2$                       B)  $2.4 \text{ m/s}^2$                       C)  $0.40 \text{ m/s}^2$                       D)  $2.8 \text{ m/s}^2$
- 4) An astronaut standing on a platform on the Moon drops a hammer. If the hammer falls 6.0 meters vertically in 2.7 seconds, what is its acceleration?
- A)  $1.6 \text{ m/s}^2$                       B)  $2.2 \text{ m/s}^2$                       C)  $9.8 \text{ m/s}^2$                       D)  $4.4 \text{ m/s}^2$
- 5) A roller coaster, traveling with an initial speed of 15 meters per second, decelerates uniformly at  $-7.0 \text{ m/s}^2$  to a full stop. Approximately how far does the roller coaster travel during its deceleration?
- A) 1.0 m                              B) 16 m                              C) 32 m                              D) 2.0 m
- 6) What is the speed of a 2.5-kilogram mass after it has fallen freely from rest through a distance of 12 meters?
- A) 15 m/s                              B) 43 m/s                              C) 4.8 m/s                              D) 30. m/s