

Monday Reading Assessment: Unit 1, Acceleration and Kinematics

Prof. Jordan C. Hanson

September 16, 2019

1 Chapter 2 - Kinematics

1. Plus and minus signs are used in one-dimensional motion to indicate direction. What is the sign of an acceleration that reduces the magnitude of a negative velocity? Of a positive velocity?

2. What is the acceleration of a rock thrown straight upward on the way up? At the top of its flight? On the way down?

3. Which of the following is true of a rock thrown straight upwards that is being accelerated downwards by gravity?
 - A: The vertical displacement versus time is a quadratic curve with a peak at the maximum height.
 - B: The vertical displacement versus time is a linear line.
 - C: The vertical displacement versus time is a flat line.
 - D: The vertical displacement versus time is a quadratic curve with a valley at the minimum height.

4. Which of the following is true of a car that is decelerating because the driver is pressing the brake pedal?
 - A: The horizontal velocity versus time is a quadratic curve with a peak at the maximum height.
 - B: The horizontal velocity versus time is a linear line with negative slope.
 - C: The horizontal velocity versus time is a linear line with positive slope.
 - D: The horizontal velocity versus time is a quadratic curve with a valley at the minimum height.