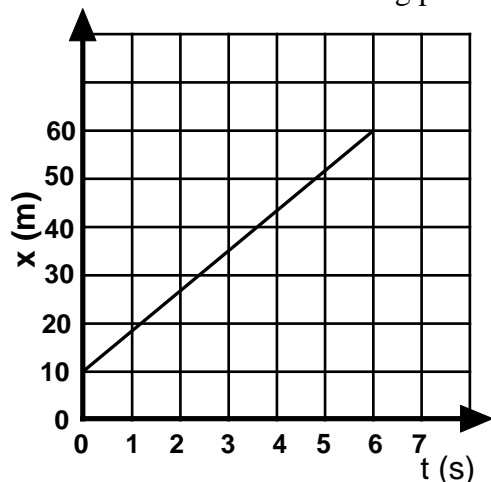Name_____

Date_____ Pd____

Unit 1 Constant Velocity:
Review Sheet

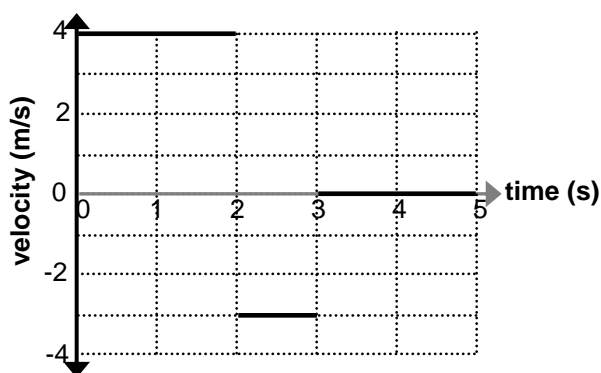1. Consider the following position vs. time graph.
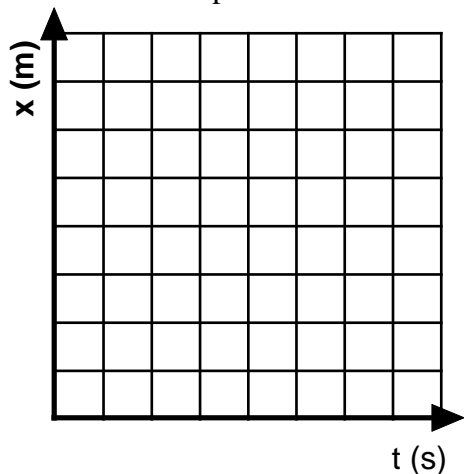

a. Determine the average velocity of the object.

b. Write a mathematical expression to describe the motion of the object.

2. Shown below is a velocity vs. time graph for an object.

a. Describe the motion of the object.

b. Draw a corresponding position vs. time graph. Number the axes. You may assume the object starts from zero position.
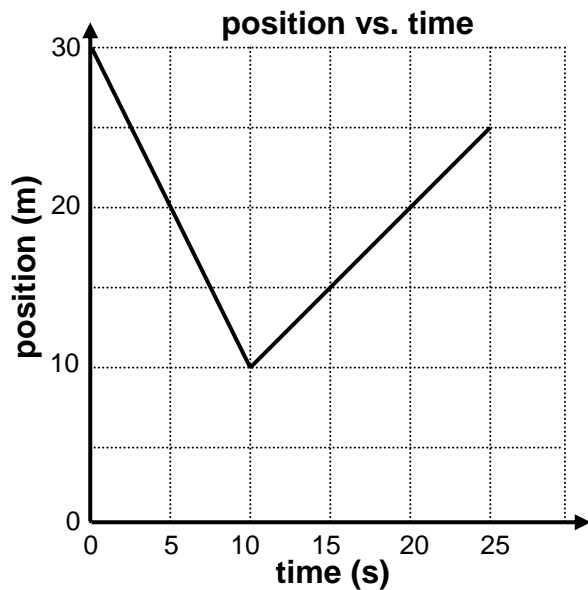

c. How far did the object travel in the interval t = 1 s to t = 2 s?

d. Find the displacement from t = 0 s to t = 5 s. Explain how you got your answer.

e. Find the average velocity from t = 0 s to t = 5 s. Explain how you got your answer.

f. Find the average speed from t = 0 s to t = 5 s. Explain how you got your answer.

3. A bird travels toward zero position, then suddenly reverses direction.

position vs. time

a. Find the average velocity from t = 0 s to t = 10 s.
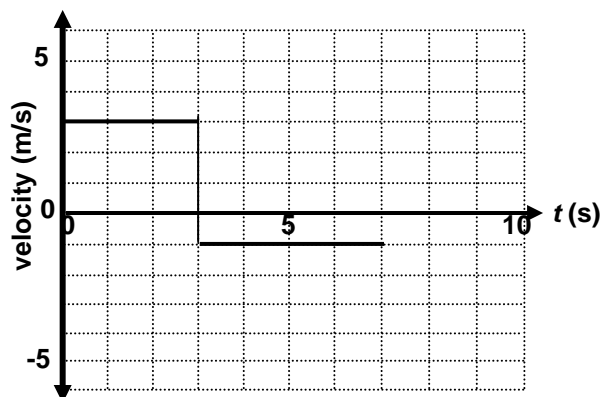
b. Find the average velocity from t = 10 s to t = 20 s.

c. Determine the average speed from t = 0 s to t = 20 s.

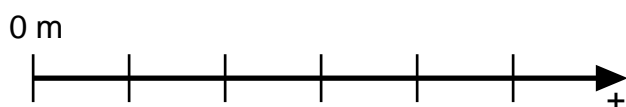d. Determine the average velocity from t = 0 s to t = 20 s.

e. Find the velocity at t = 5 seconds.

4. A basketball initially travels at 3 meters per second for 3 seconds:

a. Describe the motion of the ball after t = 3 seconds.

b. Draw a quantitative motion map that represents the motion of the object.

0 m

+

c. How far did the ball travel from t = 3 s to t = 7 s?

5. A racecar reaches a speed of 95 m/s after it is 450 meters past the starting line. If the car travels at a constant speed of 95 m/s for the next 12.5 s, how far will the car be from the starting line? Use the appropriate mathematical expression and show how units cancel.