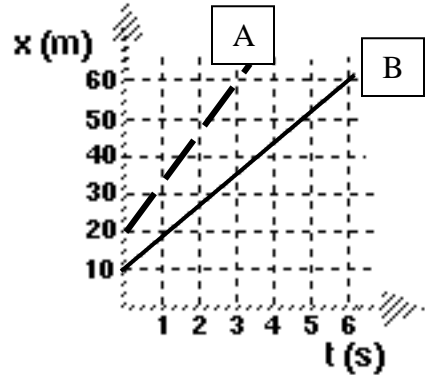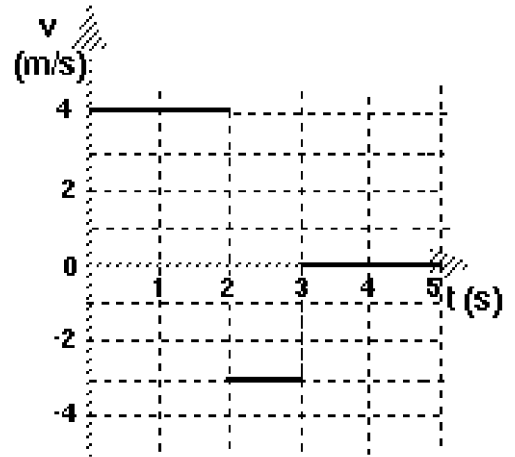**Name** _____ **Date** _____ **Period** ____

Unit 2 Review

1. Consider the position vs. time graph at right.
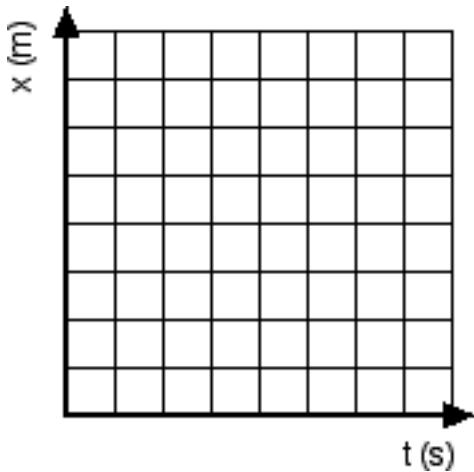   a. Determine the average velocity of object A.

    b. Write an equation to describe the motion of object B.

    c. List any differences between the motion of objects A & B.

2. To the right is a velocity vs. time graph for an object.

    a. Describe the motion of the object.

   b. Draw the corresponding position vs. time graph. Number the x - axis.

    c. How far did the object travel in the interval t =1s to t =2s (show work using the graph and an equation)?

d. What is the **total** displacement? Show work or explain how you got the answer.

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

3. A bird travels toward the origin, then suddenly reverses direction.

Position vs. Time
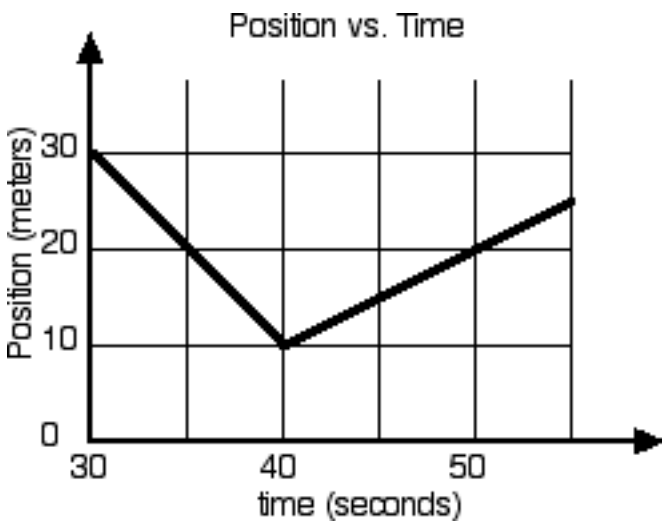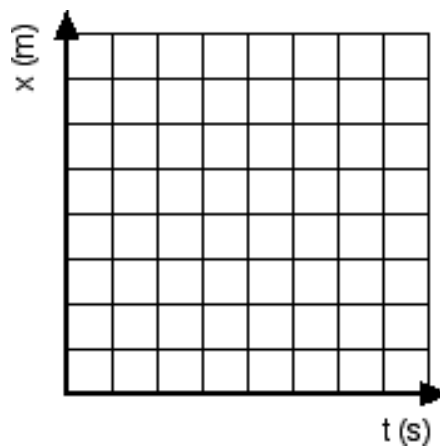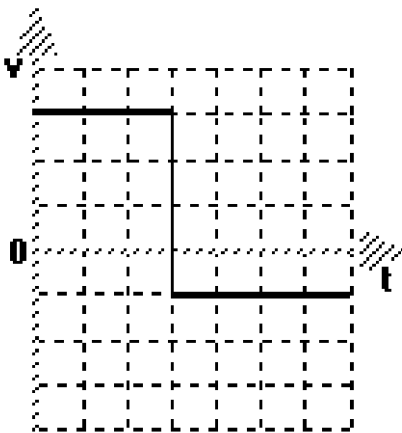

a. Determine the average speed from t = 30s to t = 50s.

b. Determine the average velocity from t = 30s to t = 50s.

c. Find the velocity at t = 35 seconds.

4. Use the v vs t graph below to make a qualitative x vs. t graph.

5. A race car travels at a speed of 95 m/s. How far does it travel in 12.5 s? Use the appropriate equation.

6. An elephant is walking at 5 mph for 30 minutes and then quickens his pace to 8 mph for 1 hour. He finds a watering hole and rests for another 30 minutes. He finally decides to start moving again but he now only walks at 3 mph for another 2 hours. A) How far did the elephant walk? B) What was his average velocity?

7. A girl releases a toy car. It travels at 0.8 m/s and hits a wall that is 12 m away. If it took 15.03499 s for the girl to hear the sound of the car running into the wall, how fast is the speed of sound at that location?

** Be sure to review ALL worksheets with word problems **