**DATA SHEET**

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

15 questions, 2 points each, 30 points total

1. Paste the first position-time graph below.
2. Describe the difference between a position-time graph made by walking slowly away from the sensor and one made by walking away quickly.
3. Describe the difference between a position-time graph made by walking slowly away from the sensor and one made by walking toward the sensor slowly.
4. Paste the position-time graph with your prediction from part 1 below.
5. Is your prediction the same as the final result? If not, describe how you would move to make a graph that looks like your prediction.
6. Paste the first velocity-time graph below (Part 2a).
7. What is the most important difference between a velocity-time graph made by slowly walking away and one made by quickly walking away?
8. How are the velocity-time graphs different for motion away from and motion toward the sensor?
9. Paste the velocity-time graph with your prediction for Item 2b below.
10. Is your prediction the same as the final result? If not, describe how you would move to make a graph that looks like your prediction.
11. Place the graphs from Item 3a below.
12. What is the average velocity that you calculated from the velocity-time graph?
13. Record the equation of the fit that you found from the position-time graph. Compare the slope with the average velocity recorded above.
14. What is the meaning of the *y*-intercept from the fit?
15. How can you tell from a velocity-time graph that the moving object has changed direction? What is the velocity at the moment the direction changes?