Physics 1101 Experiment 9 Pre-Laboratory Assignment

Name_____ Instructor name _____

You must show and explain all work neat and organized to receive credit. Please show each step for calculations. YOU MUST TURN IN THIS SHEET to have your assignment graded.

1. Please define average velocity and average acceleration. How does a smart pulley work? (5pts)

2. (a) Explain the difference between constant velocity and constant acceleration. (b) Are you more likely to be able to walk at a constant velocity or constant acceleration? (c) For the equation $x = x_0 + v_0 t + \frac{1}{2}at^2$ what does a graph of x versus t look like? (d) What does the graph look like if $a = 0$? **Please sketch graphs and give detailed explanations.** (7 pts)

3. Calculate the average velocity for each of the four time intervals. What is the physical meaning of a negative average velocity? (8 pts)

Position (m)	1.38	1.63	2.23	2.08	1.98
Time (s)	1.17	1.65	2.08	2.65	3.16