

Experiment 2: Velocity & Acceleration

Student Name: _____

Section Number: _____

PRELAB

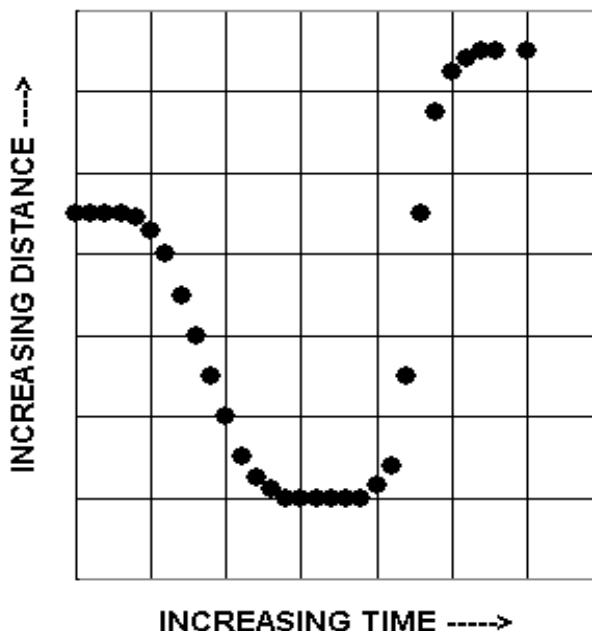
PRE-LAB Instructions:

Print out this page. Feel free to refer to the lab Instructions and other materials, your physics textbook, other students, etc. to help you to ponder, understand, and work out answers to the following question(s). Show your work & answers in the space(s) provided.

PRE-LAB Questions

A car is driven along a straight road. Its distance relative to a cross street is graphed at right:

- 1) draw CIRCLES around groups of points that indicate zero velocity for the car.
- 2) draw PLUS symbols near points in groups that indicate a positive velocity.
- 3) draw MINUS symbols near points in groups that indicate a negative velocity.
- 4) draw BOXES around groups of points that indicate either positive or negative acceleration. for the car.



5) In the space below, sketch a graph of the velocity vs. time that corresponds to the above chart.



- 6) Consider a ball that is dropped from rest from a height of 1.0 meter above the floor. It starts at rest, then speeds up, suddenly reverses direction, and then slows as it rises. Suppose it bounces off the floor and rises back up to a height of 1.0 m (it is a super super-ball). Sketch x , y , v_x , and v_y vs. time graphs of this motion, as illustrated in the theory section of this report.