Name: _____

2.2 Position and Time

Question: How do you model the motion of the car?

1 Setting up the experiment

There are no questions to answer in part 1.

2 Understanding and using Table 1

As you measure the time it takes the car to travel to different positions, you will record your data in the table in part 3.

3 Collecting and recording your data

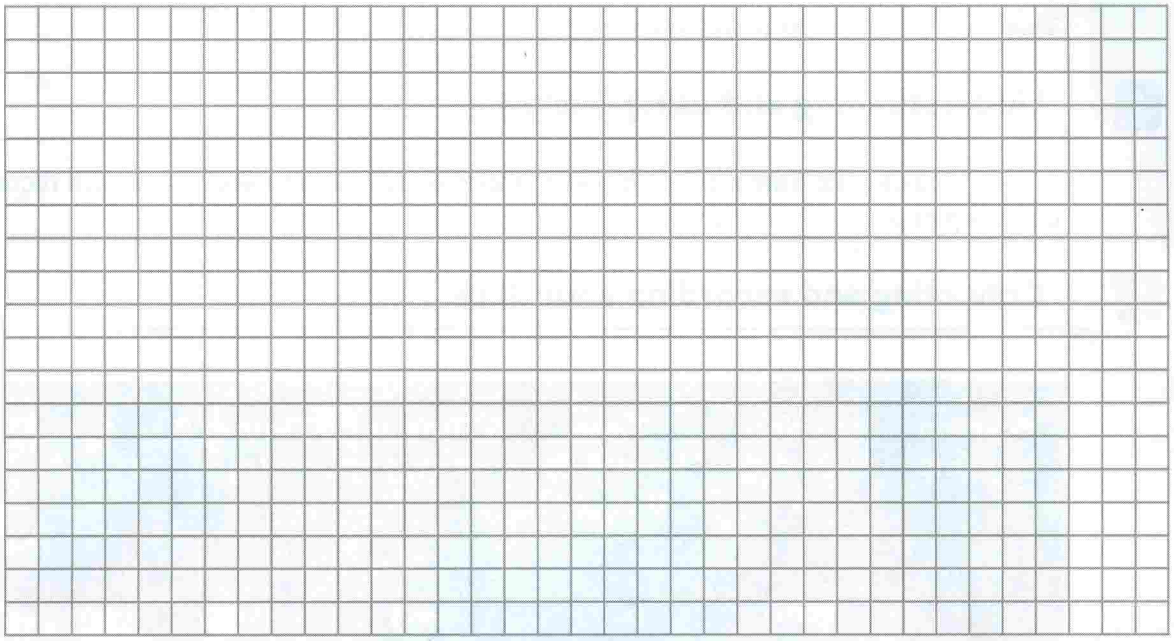
Position on ramp	Distance from A to B	Time from A to B (t_{AB})	Time at A (t_A)	Time at B (t_B)	Speed at A	Speed at B
	(cm)	(sec)	(sec)	(sec)	(cm/sec)	(cm/sec)
1						
2						
3						
4						
5						
6						
7						
8						

4 Graphing and analyzing your data

a. Make a distance vs. time graph using your data. Plot the time from A to B on the *x*-axis and the distance from A to B on the *y*-axis. At this point, do not connect the data points on the graph. Be sure to label the axes and title the graph.

Title: _____

y label: _____



x label: _____

b. Is the graph a straight line or a curve?

_____

c. Does the graph get steeper as the car rolls farther, or does the graph keep the same slope the whole way? What does your answer tell you about the speed of the car at different times along its roll down the ramp?

_____

_____

_____

d. Pick two points near the bottom of the graph and two more near the top of the graph. Draw two triangles and calculate the speed from the slope of the graph. Is the value you get consistent with other speed measurements you have made with the car and ramp?

_____