Results Worksheet

Name _____

Part 1A. Measure the time it takes your car to travel a fixed distance at each potentiometer setting. Do 3-5 trials at each setting

Potentiometer Setting	Trial 1 time (s)	Trial 2 time (s)	Trial 3 time (s)	Trial 4 time (s)	Trial 5 time (s)	Distance (cm)
1						
2						
3						
4						
5						

Part 1B. Describe how you calculate average time in the box below:

Part 1C. Calculate the average time for each of the potentionmeter settings:

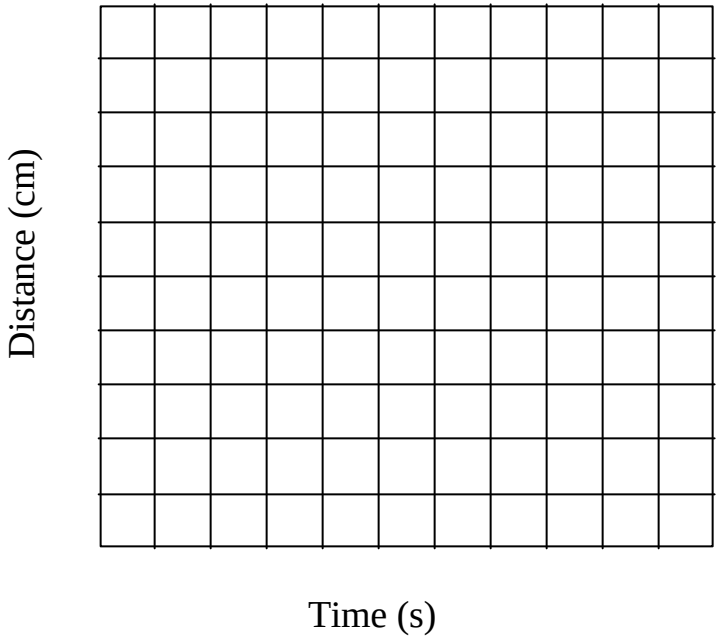
Potentiometer Setting	Average time (s)
1	
2	
3	
4	
5	

Cont. on page 2

2A. Copy your average time and distance from part 1.

Potentiometer Setting	Average time (s)	Distance (cm)
1		
2		
3		
4		
5		

2B. Graph distance versus average time for each potentiometer setting. Remember to note the setting next to each point. If your car worked at all settings, you will have five time-distance graphs when you finish



3B. Write your equation for average speed in the box below:

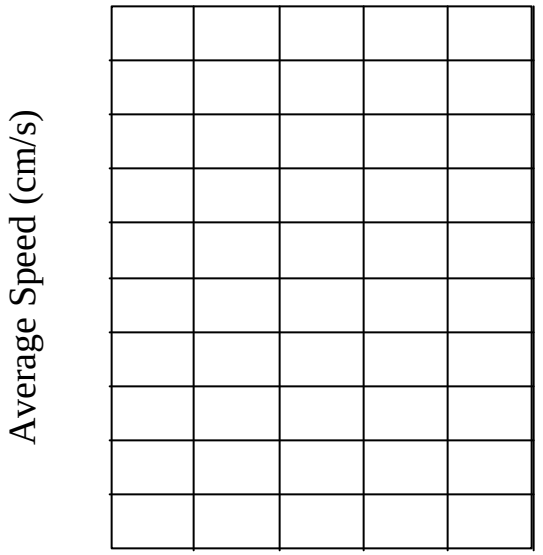
3A. Again, copy your average time and average distance from part 1.

Potentiometer Setting	Average time (s)	Distance (cm)
1		
2		
3		
4		
5		

3C. Calculate average speed at each potentiometer setting. Show your calculations

Potentiometer Setting	Average Speed	Calculations
1		
2		
3		
4		
5		

3D. Graph average speed versus potentiometer setting



Cont. on page 4

4A: Answer the following questions:

If you set the potentiometer at 3.5 (between settings 3 and 4) , how fast do you think your car would go?

How did you get your answer?

If you want your car to go 40 cm/s, where should you set the potentiometer?

How did you get your answer?

4B: Challenge: Your teacher will pick a speed. Try to pick the potentiometer setting that will make your car travel at that speed, using your graph to make your guess. Time your car at that setting, and see which group from the class comes closest on their first try.