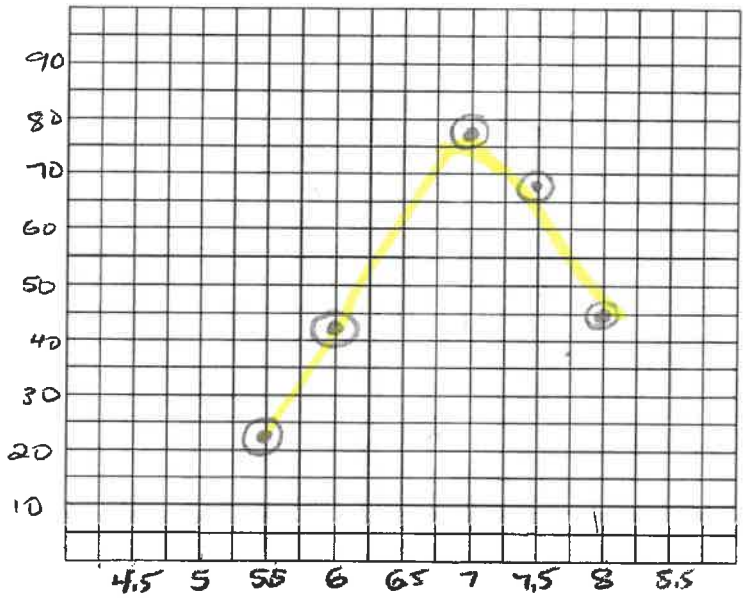
Graphing Activity # 1

You are given the following data set showing the number of tadpoles that develop depending on the pH of pond water.

pH of water	Tadpoles
8.0	45
7.5	69
7.0	78
6.5	88
6.0	43
5.5	23

1. What is the independent variable? pH of water
2. Why is this the independent variable? will be changed
3. What is the dependent variable? # of tadpoles
4. Why is this the dependent variable? will change depending on the pH
5. Use the data to complete the graph provided. Remember to title your graph, label the axes properly when setting up your scale, and to use a smoothed line of best fit.



6. Using a complete sentence, state the general relationship between pH and tadpoles.

The pH has no effect on the # of tadpoles.

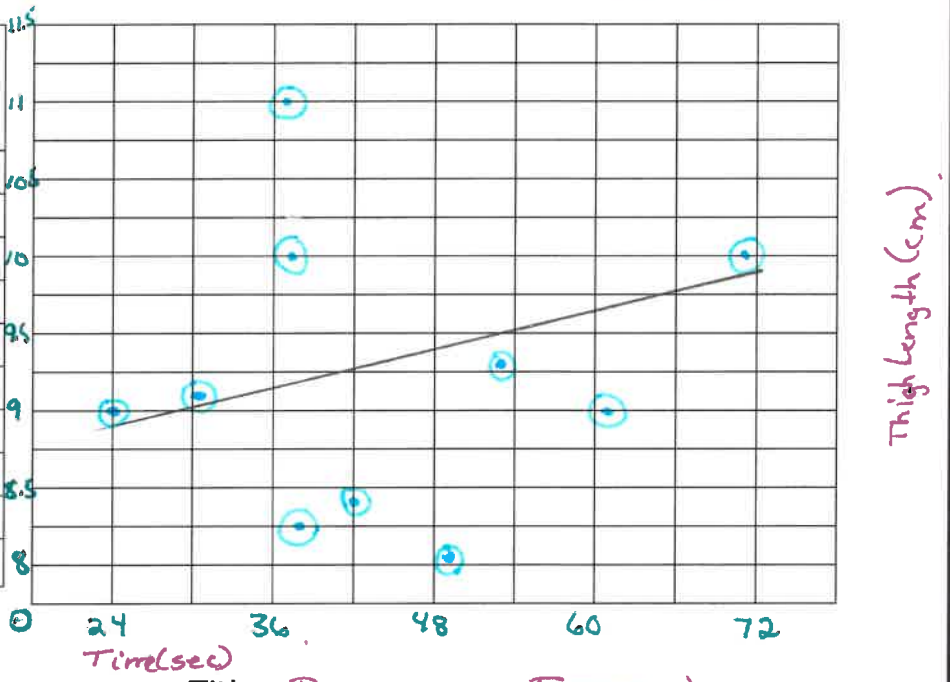
Name _____ Date _____

Make a Line Graph (Speed and Pressure)

Line graphs are very helpful to compare 2 sets of data and find relationships.
Directions: Make a line graph for each set of data below. Label both the x (horizontal) and y (vertical) axis properly. Give each graph a title.

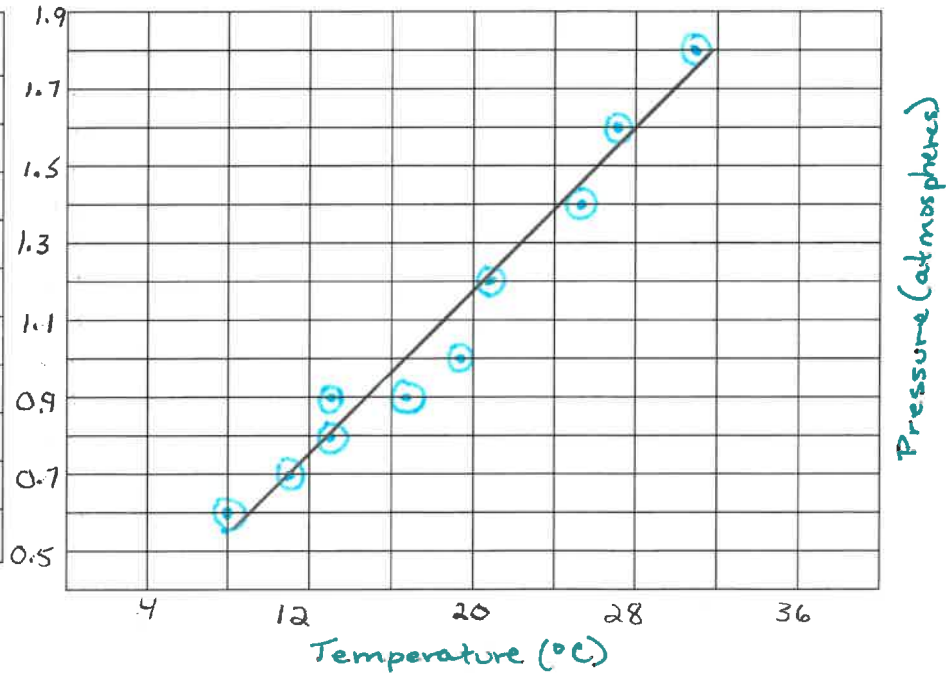
Title: Time to Run 40m vs Leg Length

Leg (thigh) Length (cm)	Time of 40 yard dash (sec)
24	9
31	9.2
37	11
38	10
39	8.2
42	8.4
51	8.1
55	9.3
62	9
71	10



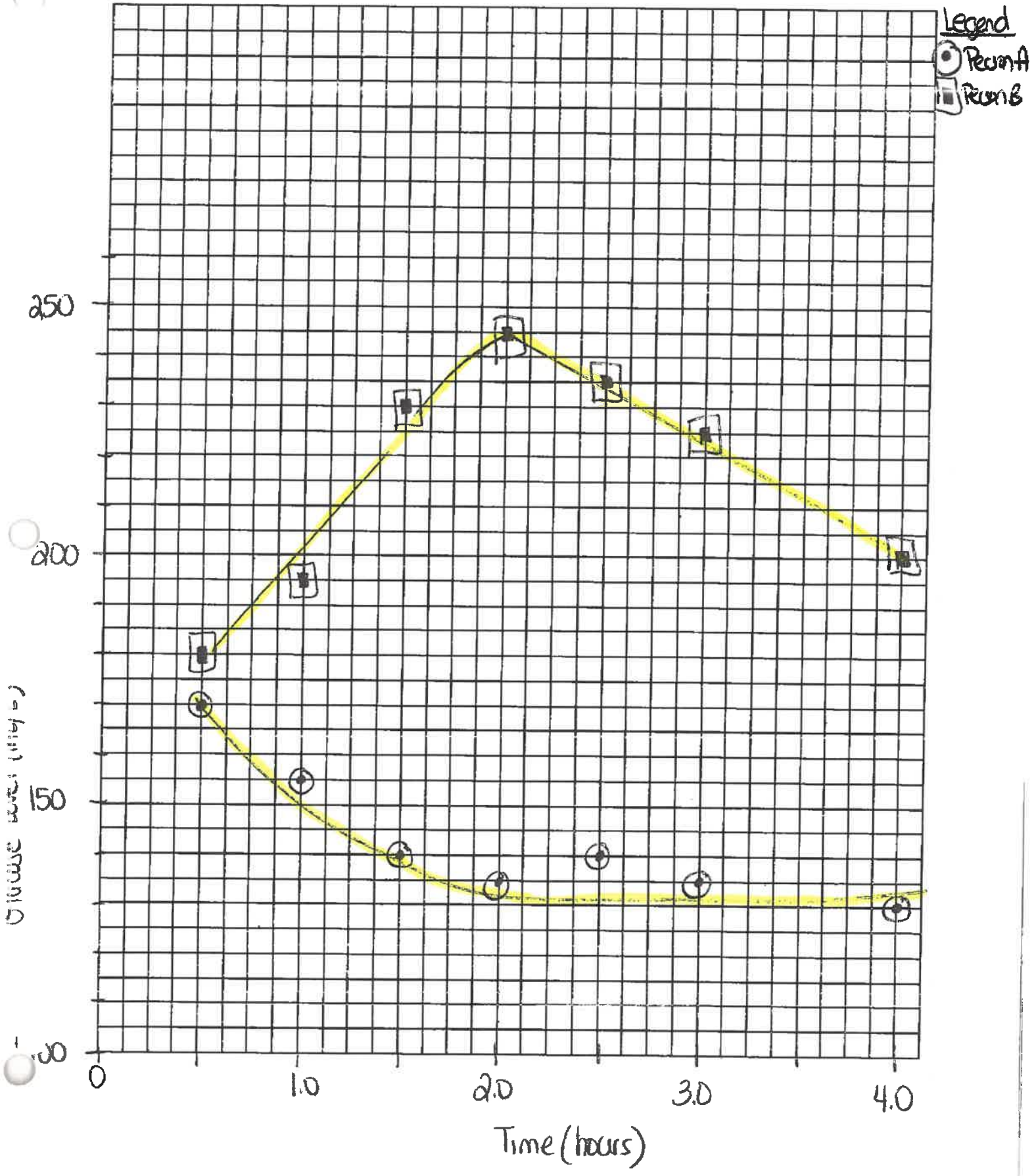
Title: Pressure vs Temperature

Temp. (C°)	Pressure (atmos.)
31	1.8
27	1.6
26	1.4
22	1.2
19	1.0
17	0.9
14	0.9
14	0.8
11	0.7
8	0.6



Glucose Level vs Time Following Eating

Science 10 Welter
Intro to Graphing



Answer the following questions based on the Blood-Glucose graph you just completed.

1. What is the independent variable? time

2. Why is this the independent variable? This can be controlled as time is constant.

3. What is the dependent variable? Blood glucose level

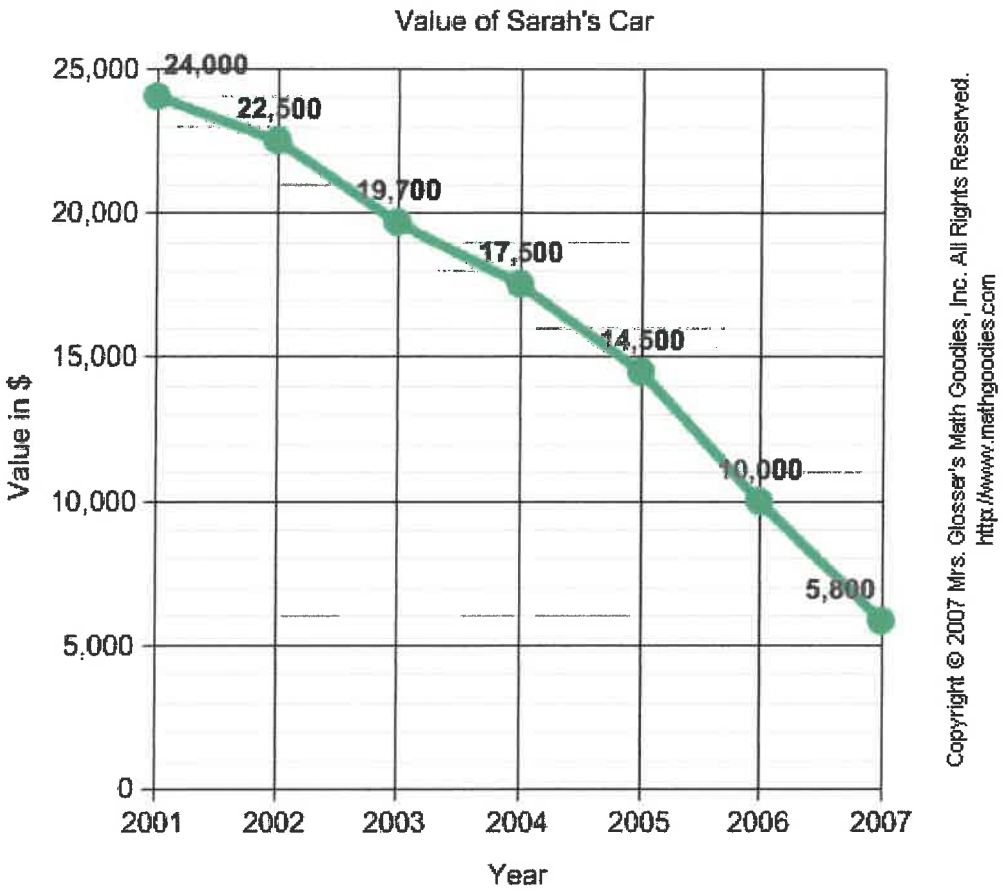
4. Why is this the dependent variable? Because this is the factor we are watching to see change and is reliant upon the time passing.

5. Which, if any of the above individuals may have diabetes? Be sure to justify your answer! Person B has a likelihood as his/her glucose level was higher than 140 for the entire time

6. If the time period were extended to 6 hours, what would be the expected blood sugar level for
   Person B? answers will vary, but should continue to fall

7. What would be a probable blood sugar level for person B at 3.5 hours? Answers may vary but possibly around 210.

8. Use one or more complete sentences to state a conclusion about the data in graph # 2. The level of glucose in our blood spikes about a half an hour after eating and then decreases over time.



QUESTION	ANSWER
1. What is the title of this line graph?	**Value of Sarah's Car**
2. What is the independent variable?	**Year**
3. What is the dependent variable?	**Value in dollars**
4. How many points are in the graph?	**7**
5. What was the highest value recorded?	**$24,000**
6. What was the lowest value recorded?	**$5,800**
7. Did the value of the car increase or decrease over time?	**decrease**
8. What was the value half way through 2004?	**$1 600**