Name_____

Date_____ Pd____

Scientific Methods Worksheet 1:

Graphing Practice

For each data set below, determine the mathematical expression. To do this, first graph the original data. Assume the 1st column in each set of values to be the **independent** variable and the 2nd column the **dependent** variable. Taking clues from the shape of the first graph, modify the data so that the modified data will plot as a straight line. Using the slope and y-intercept of the straight-line graph, write an appropriate mathematical expression for the relationship between the variables. Be sure to include units!

Data set 1		Data set 2	
Volume (m^3)	**Pressure (Pascals)**	**time (s)**	**position (m)**
0.1	40	0.1	0.03
0.5	8	0.2	0.12
1	2	1	3
4	1	2	12
5	.8	3	27
8	.5	4	48
10	.4	5	75
Sketch of original graph:		Sketch of original graph:	
Sketch of test plot: (Print your graph and test plot, too.)		Sketch of test plot: (Print your graph and test plot, too.)	
Mathematical expression #1:		Mathematical expression #2:	

Data set 3		Data set 4	
mass (kg)	**velocity (m/s)**	**time (s)**	**velocity (m/s)**
1	22.4	0.0	0.0
2	19.6	2.0	10.5
3	16.5	4.0	14
4	13.3	6.0	18
5	10.4	8.0	21
6	7.7	10.0	23.5
7	4.6	12.0	26
8	1.1	14.0	28
Sketch of original graph:		Sketch of original graph:	
Sketch of test plot: (Print your graph and test plot, too.)		Sketch of test plot: (Print your graph and test plot, too.)	
Mathematical expression #3:		Mathematical expression #4:	