Name_____Period_____

UNIT IIa WORKSHEET 2: SCIENTIFIC METHODS
GRAPHING PRACTICE AND MATHEMATICAL REPRESENTATIONS

1. Use LoggerPro to manually enter each of the data sets below. Assume the 1st column in each data set to be the **independent** variable and the 2nd column the **dependent** variable.
2. Sketch and name the shape of the intial plot and label the axes with variable name, variable symbol, (unit).
3. Taking clues from the shape of the initial plot, use LoggerPro to transform the data to plot a straight line.
4. Sketch the shape of the final (linearized) plot and label the axes with variable name, variable symbol, (unit).
5. Using the slope and y-intercept of the linear graph, write the **exact** mathematical representation describing the curve (include units!). Treat all values below as measurements, so report constants to proper significance.

Data Set 1 (Clock Reading and Velocity)

t (s)	v (m/s)
.30	10.
1.22	21
2.76	30.
4.84	42
7.51	51
10.80	60.
14.75	72
19.24	81

Initial Plot

Final Plot

Mathematical Representation #1:

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Data Set 2 (Clock Reading and Position)

t (s)	x (m)
.1	.030
.2	.122
.5	.756
1.0	3.040
2.1	12.181
2.9	27.893
3.9	48.667
5.0	75.384

Initial Plot

Final Plot

Mathematical Representation #2:

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