

Curve fitting and Spreadsheet Graphing

Name _____

Directions: Using Calc on your netbook, graph each of the following sets of data and determine what the graph looks like, the equation of the graph is, the graphical relationship between the two variables. Make sure all graphs have

Using Calc create a spreadsheet that has a name in the following format: firstnamelastnamecurvefit. When you complete your spreadsheet, you will have four worksheets each with one set of data and one graphs.

Data Set 1:

Mass (kg)	Acceleration (m/sec ²)
0.90	9.0
1.50	5.3
1.75	4.6
2.25	3.5
3.00	2.7
3.25	2.5

What type of curve was produced when you graphed acceleration vs mass? _____

Which spreadsheet trendline did you use to find the equation of the curve? _____

What is the equation of the curve? _____

What is the graphical relationship between mass and acceleration? _____

Discuss what factors told you that this was the correct relationship.

Select the Sheet 2 tab at the bottom of the page.

Data Set 2:

Time (sec)	Position (m)
0	0
1	4
2	14
3	31
4	56
5	88

What type of curve was produced when you graphed acceleration vs mass? _____

Which spreadsheet trendline did you use to find the equation of the curve? _____

What is the equation of the curve? _____

What is the graphical relationship between mass and acceleration? _____

Discuss what factors told you that this was the correct relationship.

Data Set 3:

Mass (kg)	Period (sec)
0.10	0.220
0.25	0.350
0.33	0.400
0.50	0.500
0.75	0.600
0.90	0.666

What type of curve was produced when you graphed acceleration vs mass? _____

Which spreadsheet trendline did you use to find the equation of the curve? _____

What is the equation of the curve? _____

What is the graphical relationship between mass and acceleration? _____

Discuss what factors told you that this was the correct relationship.

Given the equation for the period of a mass on a spring, what is the spring constant of the spring? _____

Data Set 4:

Mass (kg)	Distance (m)
0.03	0.1
0.034	0.15
0.027	0.12
0.029	0.14
0.031	0.13

What type of curve was produced when you graphed acceleration vs mass? _____

Which spreadsheet trendline did you use to find the equation of the curve? _____

What is the equation of the curve? _____

What is the graphical relationship between mass and acceleration? _____

Discuss what factors told you that this was the correct relationship.

Wrap Up:

How can the graphs help you determine the relationship between variables and their associated equations?

Print each of the 4 worksheets and this sheet. Staple them together and turn them in.