Name:_____Date:_____Period:_____Group#:_____

Graphing on Google Sheets

Part A: Creating a Scatter Plot on Spreadsheets

1. Type the following data into the upper left corner (Box A1) of the spreadsheet.

Volume (mL)	Mass (g)
76.6	94.313
53.8	60.999
57.7	69.118
58.3	66.333
45.5	53.833
56.4	67.775

2. Highlight all of the data by clicking on the 76.6 in the Volume column and holding and dragging until you get to the 67.775 in the Mass column.
3. At the top of the screen, click on the Insert tab. Then click on Chart.
4. In the new window, click on the tab that says Charts and then on the left side of the window, click scatter.
5. Select the scatter plot with the small dots.
6. At the top of the window, select Customize.
7. Write Mass v Volume for the Title.
8. For the horizontal axis, type Volume (mL).
9. Next click on the dropdown menu next to axis and select left vertical instead of horizontal. Type mass (g) as the title.
10. Scroll down to the bottom and click trendline – linear.
11. Scroll farther down and click Label – Use equation
12. Check the box for R^2.

Part B: Using Formulas on Spreadsheets

1. In Column C, write the header "Density".
2. As we know, density=mass/volume. Instead of having to calculate the value for every measurement, you can use formulas on Google Sheets as a short cut.
3. Double click in the first box under Density (C2).
4. Write an equal sign (=), click on the mass in box B2. Write a division sign (/) and then select the volume in A2. Click enter. You should have gotten the answer 1.231240209.
5. In box C3, do the same thing you did in step 6 but click the Mass in B3/ Volume in B3. You should have gotten 1.133810409.
6. Now here is an even better trick. Delete everything from Box C3. Now click on box C2. Do you see the square that is in the corner of box C2? Hover over that square so your cursor turns in to a black cross. Using the black cross, click on that little square and drag your cursor until C2 through C3 is all highlighted.
7. If you want to figure out what the average density was for all the trials, write the word Average in box B9 and then go to box C9 and write **=AVERAGE(** then hold down your mouse on C2 and drag down to C7. Let go and then close the parentheses (**)**)Click enter.

PRINT OUT PARTS A AND B AND TURN IN TO MR. MOSTYN

Lab Application**:**

1. On Sheet 2 of your spreadsheet, create a graph of the data from your lab. Make sure to include your actual Volume in Column A and the Mass of your sample in Column B. Make sure you include everything we included in our graph for Part A.

COPY AND PASTE YOUR FINAL TABLE AND GRAPH ONTO YOUR LAB REPORT.