

NOTE: Directions and files for download assume you are working with Microsoft Excel™ because that software is what the university provides to all students, faculty and staff. However, I encourage you to consider using the alternative and “Open Source” spreadsheet software made by Apache called [OpenOffice Calc](#). Getting all of these activities converted into both platforms is a goal of mine. Any assistance would be appreciated.

Goal for this activity: Learn the basics of graphing from an equation in two variables using a spreadsheet and included graphing capability.

Directions for Spreadsheet Activity 1:

1. Create a New, blank Excel document using Microsoft Excel application (install for free as a student at this college/university) OR use OpenOffice Calc.
2. Rename the document as follows: "YOURLASTNAME_FIRSTNAME_Math4BA"
 1. Example... My name is Mary Beth Rudis, so my file name would be "RUDIS_MARYBETH_Math4BA"
3. Type uppercase "X" into cell A1. Column A will be for a list of x values
4. Type uppercase "Y" into cell B1. Column B will be for a list of y values that correspond with the x values.
5. Each row needs to represent an ordered pair (X,Y). The numbers in A2 and B2 represent an ordered pair.
6. Your assignment: Use Excel to graph the line $y = 2x - 3$ which we can also name by $f(x) = 2x - 3$
 1. [How to Video](#)
7. Start here: Let "X" be the following numbers: 0, 1, 2, 4, 5, 7, 8. Enter these numbers into column A (rows 2 through 8). There are *skipped numbers on purpose!*
8. Your task is to **use a calculation** for "Y". In cell **B2**, type (without the " "): "**=2*A2-3**" which means that Excel will take the value of "X" that is in cell A2 and multiply it by 2 and then subtract 3. Either "**Auto Fill**" for the rest of the Y values or type the formula again until you have all seven Y values in column B.
9. Highlight (select) the block of cells from A1 to B8. Your X, Y ordered pairs should all be selected.
10. Create a smooth scatter plot, or "Scatter with smooth lines" from the menu of charts and graphs to insert. The title of your graph will simply be "Y" because it is displaying values of Y over values of X.
11. Now, insert a "text box" and answer the following questions:
 1. What is the domain of this function?
 2. What is the range of this function?
 3. There were two integer values missing (missing values of x). What would those ordered pairs be? Type them in as ordered pairs.

[How to use Auto Fill in a column](#)

This example shows a set of ordered pairs and the graph of the function they represent (Here we will see a curve that is the graph of $y = x^2$)

1. In the example seen here, ordered pairs are (1,1), (2,4), (3,9), (4,16), (5,25), (6,36), and (7,49)

