Name _____   Period _____   Date _____

GRAPHING CALCULATOR EXPLORATION: POINTS AND LINES

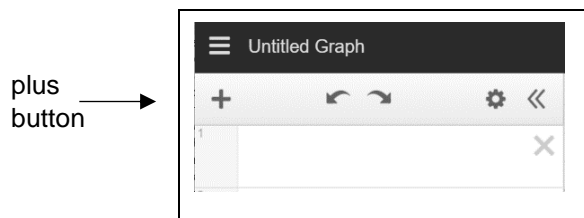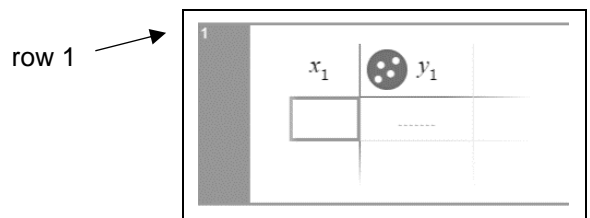Go to desmos.com and click on "Graphing Calculator."

Figure 1

row 1

Figure 2

1. Click the "plus" button (see figure 1) and then click on "table" in the drop-down menu to get a table in row 1 (see figure 2).

2. Input the *x*-values 1, 2, 3, and 4 in the table, each number in its own row. Use the "down arrow" button to go down the *x*-column.

3. Input corresponding *y*-values in the table in order: 5 ,10, 15, 20, each in its own row.

4. Do you see the four points automatically graphed? If not, then click on the "minus" button at the top right of the coordinate plane to zoom out.

5. Click the plus button again and then click on "expression." Enter an expression that will complete an equation in the form "$y =$ _____" that you think represents the correct input-output-rule for the values in the table. In other words, only write the expression that would go in the blank above.

    Your equation: ___$y = 5x$___   Describe the Desmos calculator result:
    It graphs a line that goes through the given points.

6. Do the same steps as above for the following *x*- and *y*-values: input values from the table **and** an expression into Desmos, and then below write the equation and describe the result.

A		B		C	
Input (*x*)	**Output (*y*)**	**Input (*x*)**	**Output (*y*)**	**Input (*x*)**	**Output (*y*)**
2	14	1	1.5	1	9
4	28	2	3	3	11
6	42	3	4.5	5	13
8	56	4	6	7	15
Equation: _$y = 7x$_		Equation: _$y = 1.5x$_		Equation: _$y = x + 8$_	
Description: a line through these points		Description: a line through these points		Description: a line through these points	