Name _____   Period _____   Date _____

6-7 TECHNOLOGY ACTIVITIES
GRAPHING CALCULATOR EXPLORATION: POINTS AND LINES

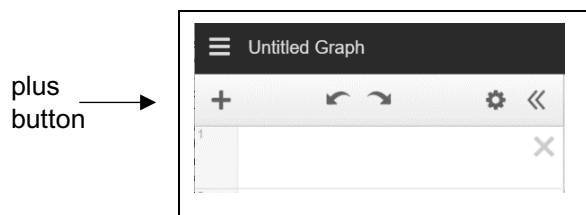Go to desmos.com and click on "Graphing Calculator."

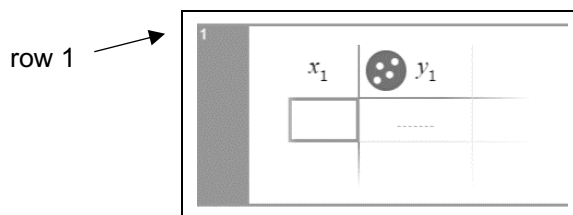
plus button →

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 *y*-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 should go in the blank above.

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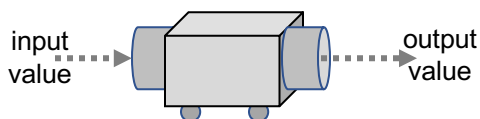
6. Do the same steps as above for the following *x*- and *y*-values: input values from the table **and** an expression into Desmos, and then below write the equation and describe the result.

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: _____		Equation: _____		Equation: _____	
Description:		Description:		Description:	

Name _____   Period _____   Date _____

6-7 TECHNOLOGY ACTIVITIES
FUNCTION MACHINE

input value ⟶ [machine] ⟶ output value

Find an appropriate input-output "function machine" rule for each table. In other words, state what could be done to each set of inputs that results in the corresponding outputs.

Table 1	
input	output
3	18
5	30
7	42
9	54
Rule:	

Table 2	
input	output
10	2
20	4
30	6
40	8
Rule:	

Table 3	
input	output
4	15
9	20
13	24
18	29
Rule:	

Table 4	
input	output
18	11
25	18
39	32
44	37
Rule:	

Table 5	
input	output
1	2.5
5.5	7
7.1	8.6
11.6	13.1
Rule:	

Table 6	
input	output
4	6
8	12
12	18
24	36
Rule:	

Table 7	
input	output
$\frac{1}{2}$	$\frac{3}{4}$
$1\frac{1}{2}$	$1\frac{3}{4}$
$2\frac{3}{4}$	3
$\frac{1}{8}$	$\frac{3}{8}$
Rule:	

Table 8	
input	output
$\frac{1}{8}$	$\frac{1}{32}$
$\frac{1}{2}$	$\frac{1}{8}$
$\frac{2}{3}$	$\frac{2}{12}$
$\frac{3}{4}$	$\frac{3}{16}$
Rule:	

Table 9	
input	output
1	$\frac{1}{2}$
$3\frac{1}{2}$	3
$5\frac{1}{4}$	$4\frac{3}{4}$
$10\frac{3}{8}$	$9\frac{7}{8}$
Rule:	