

EXPLORATION: Work independently, then check your work with a partner.

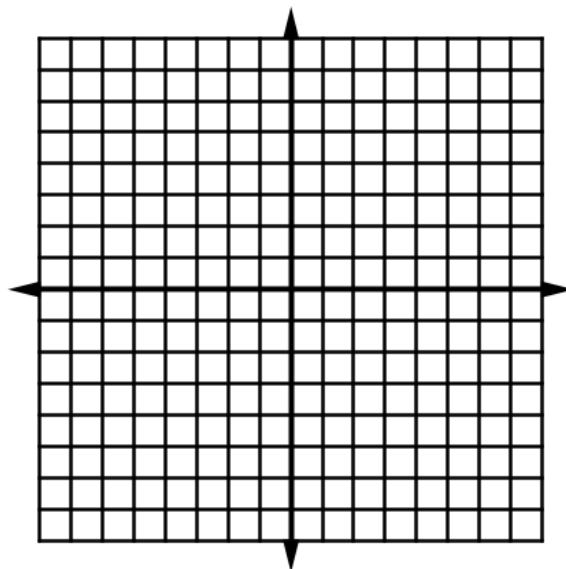
Directions: For each of the following functions:

- Use your calculator to create the tables of values,
- Use these tables of values to draw graphs for the functions,
- Compare your graphs to the ones displayed in your calculators.

Function A: Factored form

$$y = (x - 3)(x - 1)$$

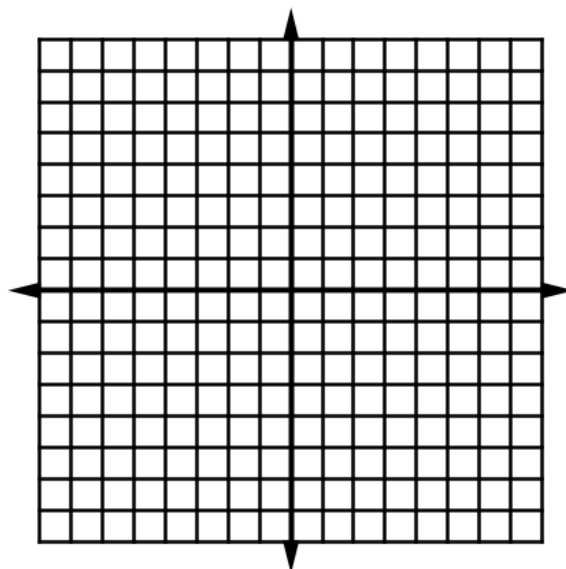
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function B: Factored form

$$y = (x - 1)(x - 5)$$

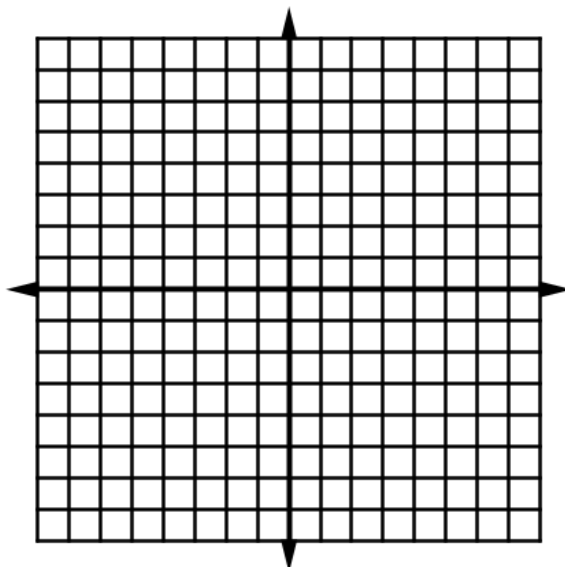
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function C: Factored form

$$y = -(x - 1)(x - 5)$$

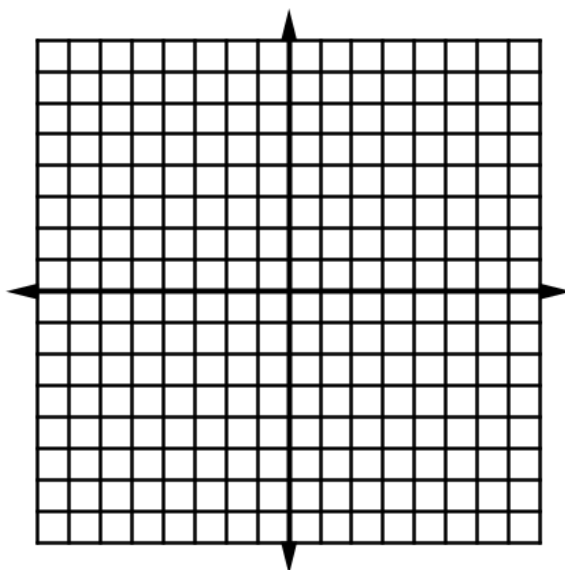
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function D: Factored form

$$y = (x - 3)(x + 1)$$

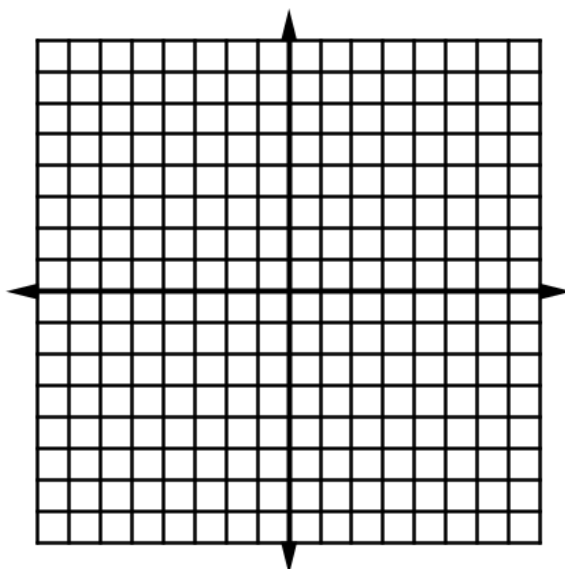
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function E: Factored form

$$y = -(x - 3)(x + 1)$$

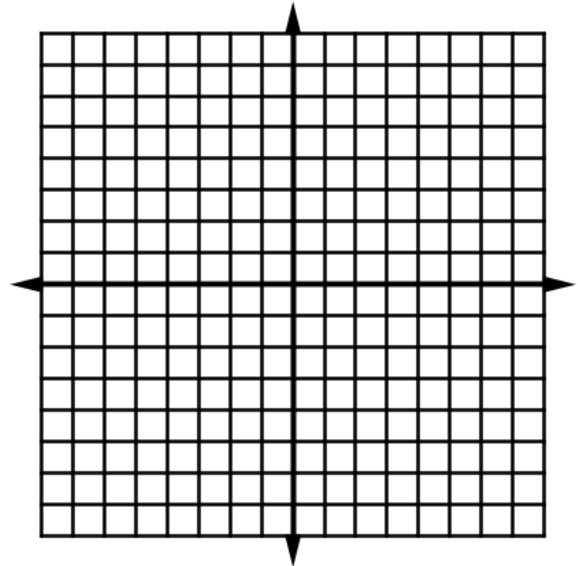
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function F: Vertex form

$$y = (x - 2)^2 - 1$$

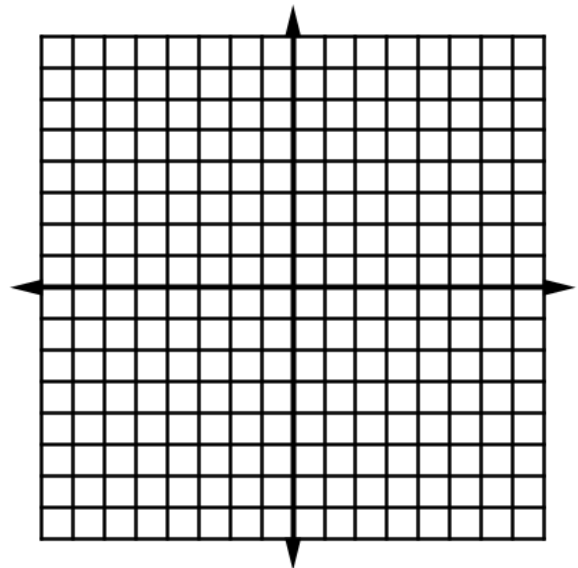
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function G: Vertex form

$$y = (x - 3)^2 - 4$$

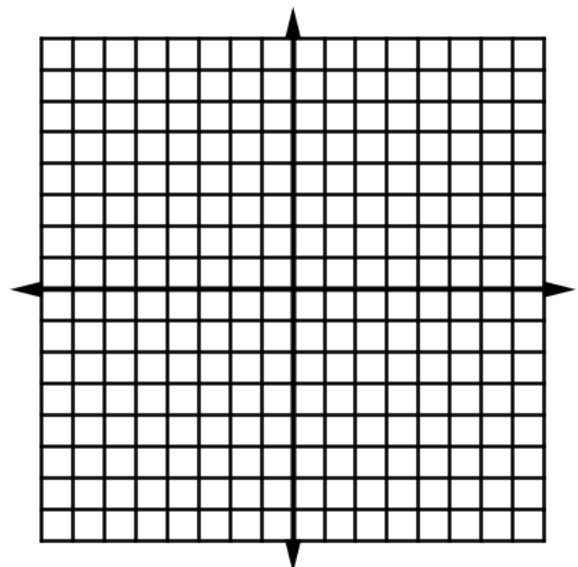
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function H: Vertex form

$$y = -(x - 3)^2 + 4$$

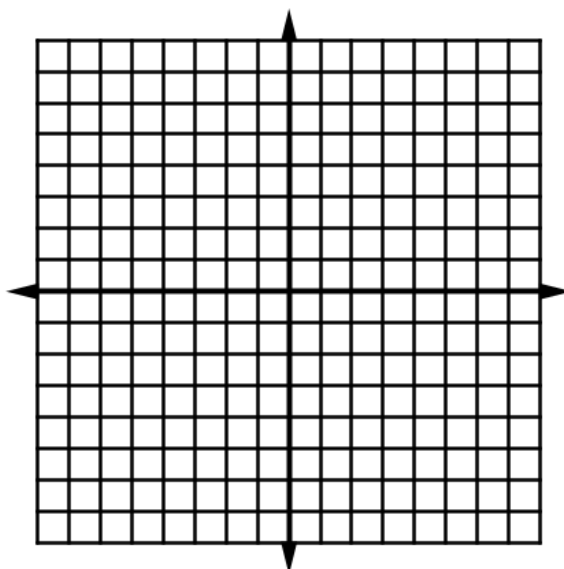
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function I: Vertex form

$$y = (x + 1)^2 - 4$$

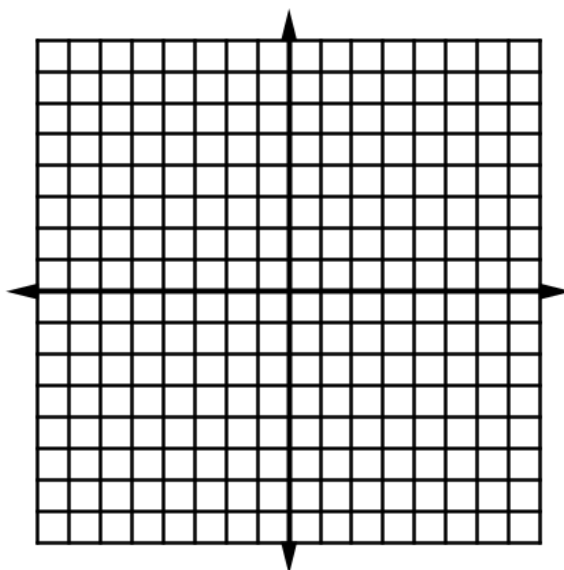
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function J: Vertex form

$$y = -(x - 1)^2 + 4$$

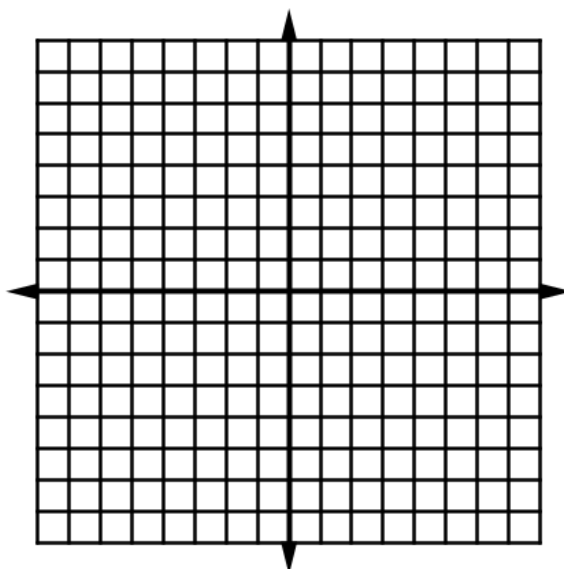
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function K: Standard form

$$y = -x^2 + 6x - 5$$

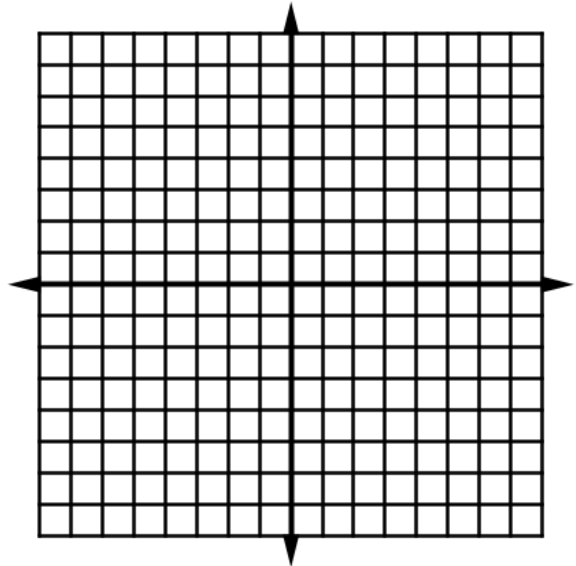
	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
<i>choose another point</i>		



Function L: Standard form

$$y = x^2 - 2x - 3$$

	x	y
y intercept		
x intercept 1		
vertex		
x intercept 2		
choose another point		



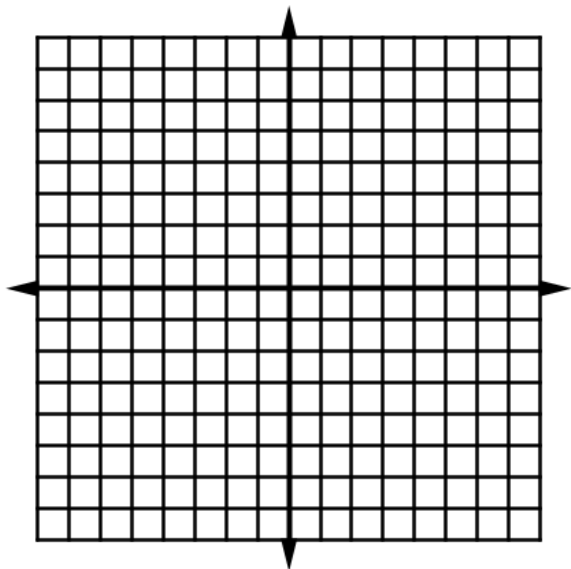
Activity 2: Look back at your tables and graphs and write down everything you notice or observe about them. What similarities do you notice within each type of function rule?

Type of Function Rule	Noticings
Factored form	
Vertex form	
Standard form	

APPLICATION & REFLECTION: Work independently, then check your work with a partner.

Directions: Graph the following functions without using your calculator.

$$y = (x - 2)^2 - 9$$



$$y = -(x - 2)(x + 2)$$

