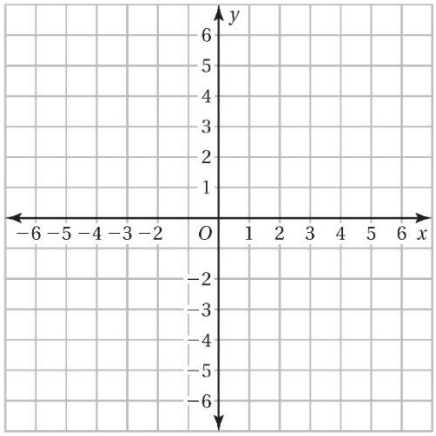
Name_____ Date_____

4.4 – Activity Worksheet

With a partner, plot the following the following equations using three points

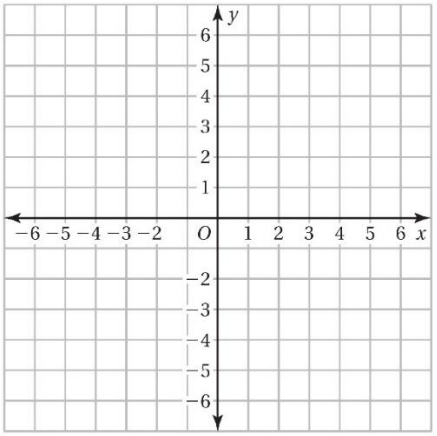
a) $y = -\frac{1}{2}x + 1$

x	y



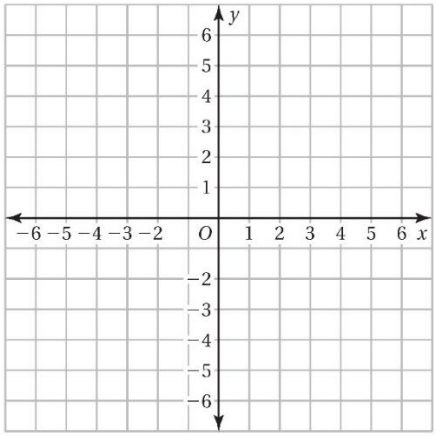
b) $y = -x + 2$

x	y



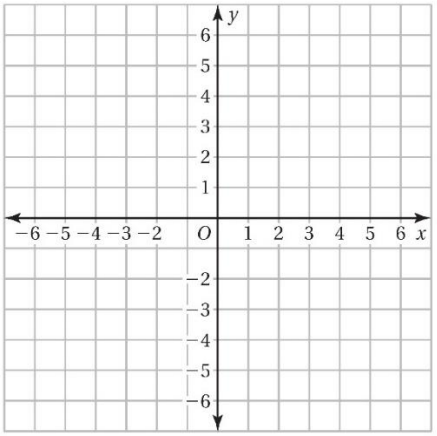
c) $y = -x - 2$

x	y



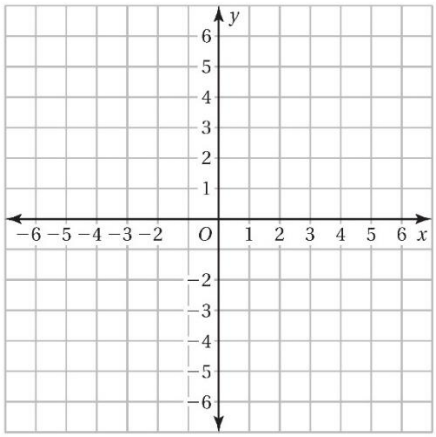
d) $y = \frac{1}{2}x + 1$

x	y



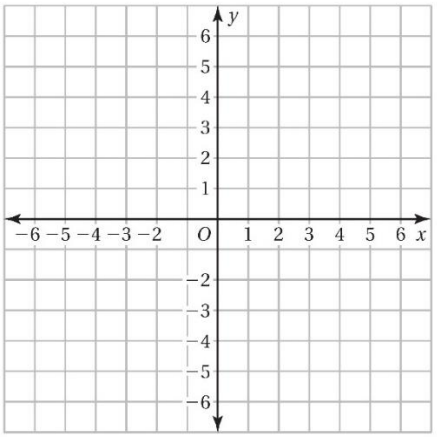
e) $y = x + 2$

x	y



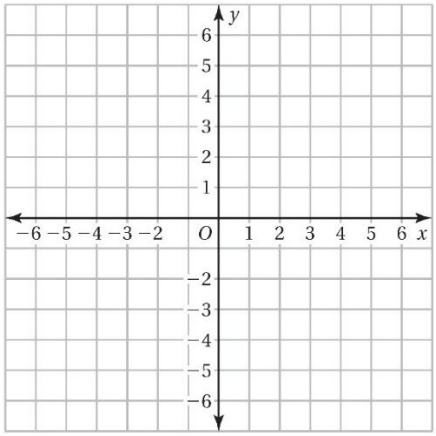
f) $y = x - 2$

x	y



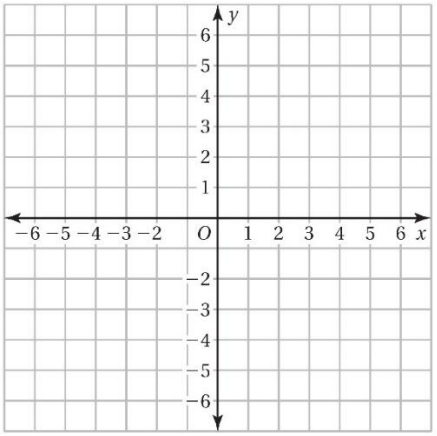
g) $y = \frac{1}{2}x - 1$

x	y



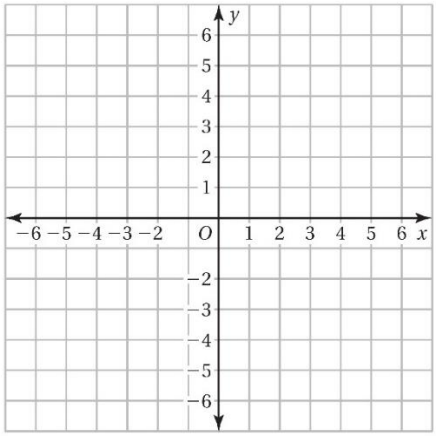
h) $y = -\frac{1}{2}x - 1$

x	y



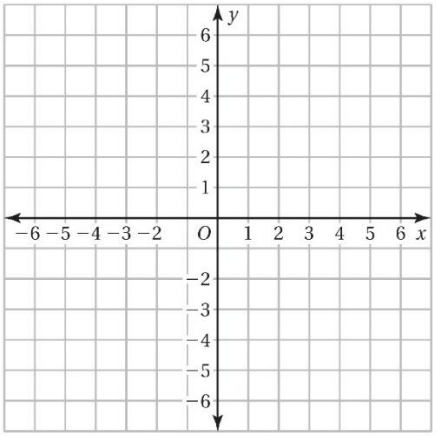
i) $y = 3x + 2$

x	y



j) $y = 3x - 2$

x	y



From the previous graphs, write the original equation that you graphed and complete the table.

	Equation	**Slope**	***y*-intercept**
a)			
b)			
c)			
d)			

	Equation	**Slope**	***y*-intercept**
e)			
f)			
g)			
h)			
i)			
j)			

1) If you notice, all of the equations are in a certain format. They all look like this form: $\boldsymbol{y = mx + b}$.

   Complete the following to help describe the graph of the equation of $y = mx + b$.

   a) How does the value of ***m*** affect the graph of the equation?

   b) How does the value of ***b*** affect the graph of the equation?

2) Why do you think $y = mx + b$ is called the *slope-intercept form* of the equation of a line? Use drawings or diagrams to support your answer.