Integrated Math 3
Unit 3: Representing Functions
3.5

Name: _____

Date: _____ Period: _____

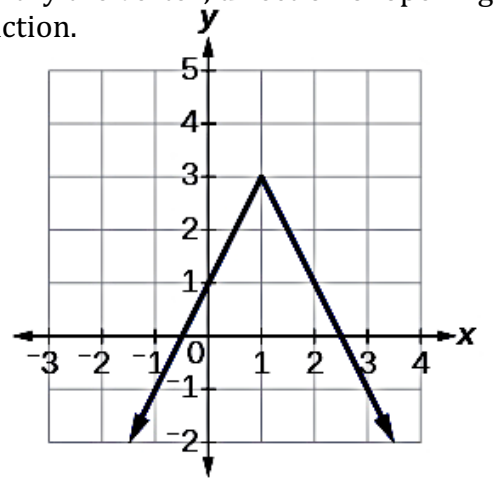
Objective: To graph absolute value functions.

Warm Up:

1. Identify the vertex, direction of opening and the slopes of the rays in the given function:

$$y = 3|x + 2| - 5$$

2. Identify the vertex, direction of opening and the slopes of the rays in the given function and write the function.



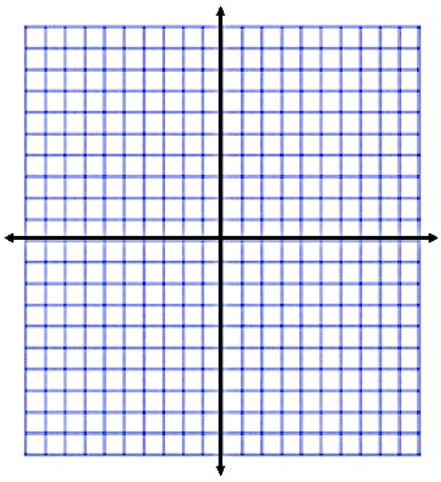
Vertex: Direction of Opening:

Slopes of Rays: Transformations:

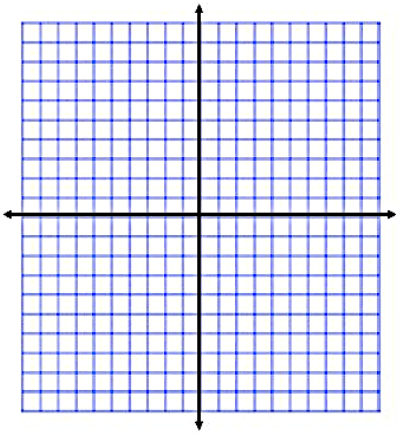
Equation:

Examples: Write an absolute value function based on the following conditions.

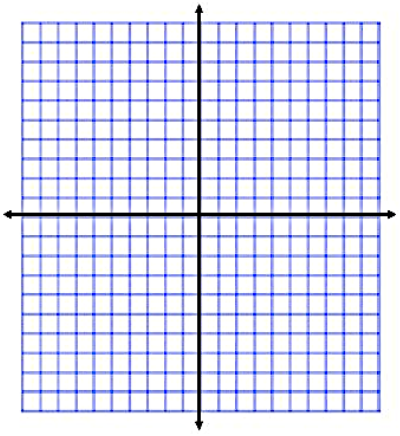
A.) Write an absolute value equation with a vertex of $(7, 6)$ that passes through the point $(9, 8)$.



B.) Given the equation of an absolute value function $g(x) = 3\,|x - 2| + k$, find the values of "k" that ensures the graph passes through the point $(-2, 7)$



C.) Write an absolute value equation with a vertex of $(1, -2)$ that passes through the point $(-3, 4)$.



D.) Given the equation of an absolute value function $g(x) = 1\,|x - 2| + k$, find the values of "k" that ensures the graph passes through the point $(7, 2)$.