

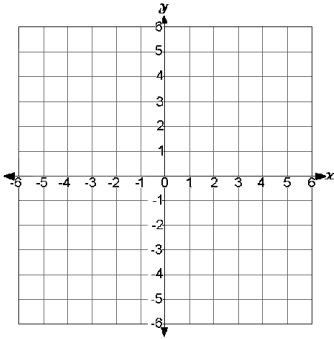
SECTION 3.7: GRAPHING ABSOLUTE VALUE FUNCTIONS

Homework: _____

Learning Targets:

- 3i. Understanding of how to describe how absolute value functions transform from their parent graph.
- 3j. Understanding of to graph absolute value functions.

Absolute Value Functions: parent graph: _____; an absolute value function is the shape of a _____.



Vertex form: _____

a: _____

h: _____ shift

k: _____ shift

vertex: _____

Domain: _____

Range: _____

Describe the transformation from the parent graph $y = |x|$. State the vertex, domain, range, and graph the function.

$$y = \frac{1}{2}|x| + 1$$

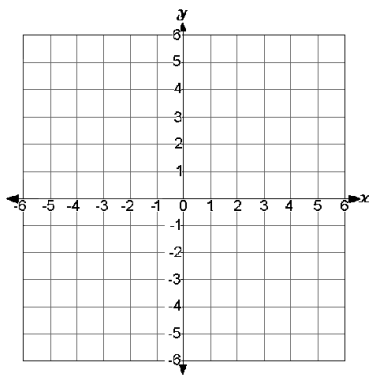
$$y = |x + 3| - 2$$

What happens?

What happens?

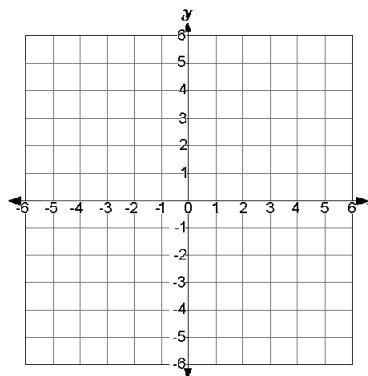
Slope: _____ Vertex: _____

Slope: _____ Vertex: _____



Domain: _____

Range: _____



Domain: _____

Range: _____

Problems for Left

Describe each transformation. Find the vertex, domain, range, and graph each function.

1. $y = |x + 2|$

2. $y = -3|x| + 4$

3. $y = |x - 1| - 3$

4. $y = -|x + 2| + 1$

Write the absolute function that represents the given transformation.

5. Right 2 and down 3

6. Slope of $\frac{1}{2}$ and left 3

7. Slope 4, up 6, and right 4

8. Slope -1, left 4, and down 2