Name:_____ Date:_____ Period:_____

Algebra Test Review:

Absolute Value Unit

Solve each absolute value equation. Graph and write your solution in interval notation.

1. $|\boldsymbol{n}-\mathbf{2}|=\mathbf{2}$

2. $|\mathbf{2}\boldsymbol{m}|=\mathbf{12}$

3. $\left|\frac{-\mathbf{8}-\boldsymbol{k}}{\mathbf{3}}\right|=\mathbf{2}$

4. $\mathbf{2}|-\mathbf{7}-\mathbf{6}\boldsymbol{v}|=\mathbf{70}$

5. $\mathbf{9 + |10 + x| = 9}$

6. $\left|\frac{n}{4}\right| + \mathbf{6 = 8}$

7. $\mathbf{|5k - 6| + 10 = 10}$

8. $\mathbf{|m - 2| - 9 = -15}$

Solve each compound inequality and graph its solution. Write your solution in interval notation.

9. $\mathbf{|2 - x| + 3 > 8}$

10. $\mathbf{6 - 2|2 - p| \leq 4}$

11. $\boldsymbol{-4\left|6+2r\right| > 20}$

12. $\boldsymbol{7\left|7x\right| - 14 > 42}$

2. Identify the transformations that occur between the parent function $f(x) = |x|$ and the new function (x).

a. $g(x) = |x - 3| + 7$

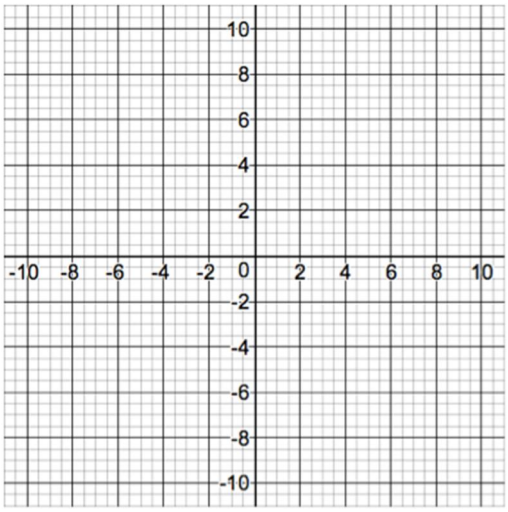
b. $g(x) = -|x| - 8$

c. $g(x) = -|x + 4|$

Graph the function in the coordinate plane. Then analyze the aspects of the graph and identify any transformations that occur in relation to the parent function, $f(x) = |x|$.

3. $f(x) = 2|x + 1| - 8$

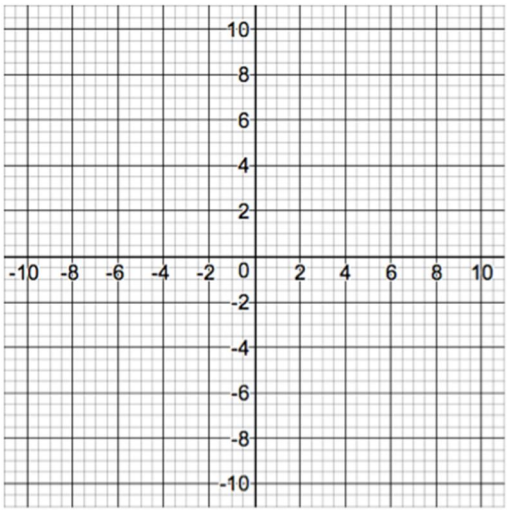
Descriptions of Transformations:



Vertex:

Axis of Symmetry:

4. $f(x) = -2|x - 4| + 2$



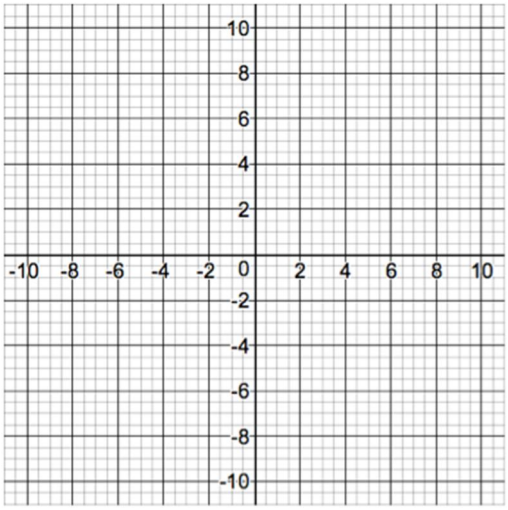
Descriptions of Transformations:

Vertex:

Axis of Symmetry:

Graph the function in the coordinate plane. Then analyze the aspects of the graph and identify any transformations that occur in relation to the parent function $f(x) = |x|$.

3. $f(x) = -\frac{1}{2}|x| + 3$



Descriptions of Transformations:

Vertex:

Axis of Symmetry: