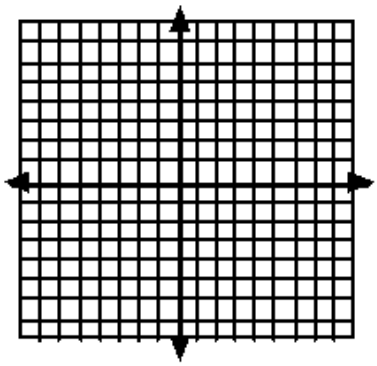
Algebra 1 Name: _____
3.7 Worksheet #2

Graph the parent function $h(x) = x$. Then graph the given equation. Identify the vertex. Determine if the translation is a shift, reflection, stretch or shrink and describe the transformation.

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

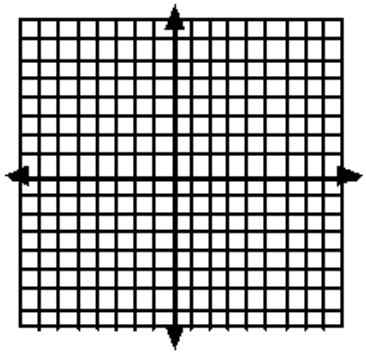
Vertex:



Transformation(s):

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

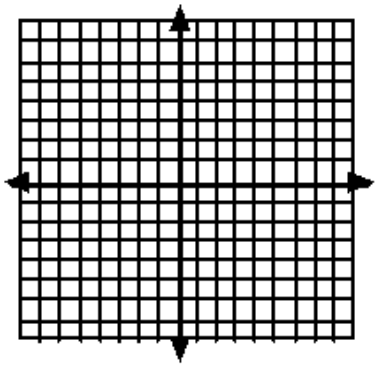
Vertex:



Transformation(s):

3. $f(x) = 4|x|$

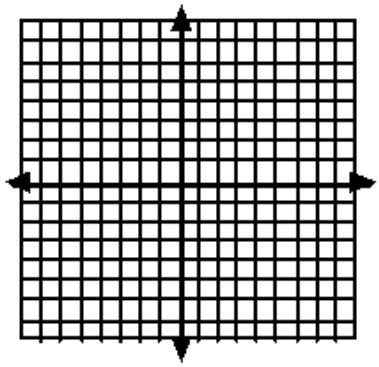
Vertex:



Transformation(s):

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

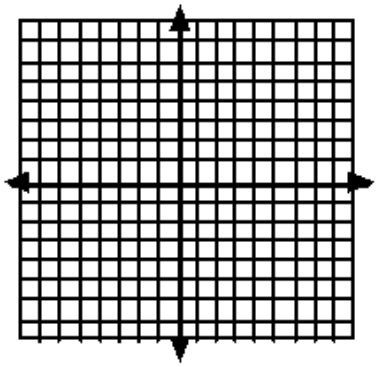
Vertex:



Transformation(s):

5. $g(x) = |x| + 4$

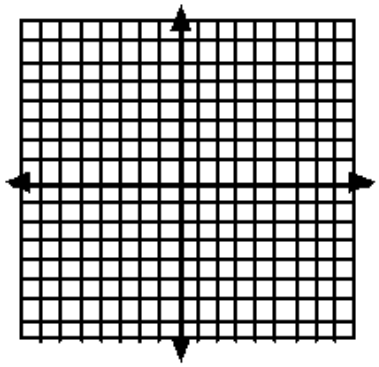
Vertex:



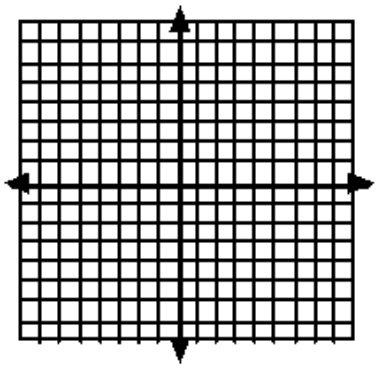
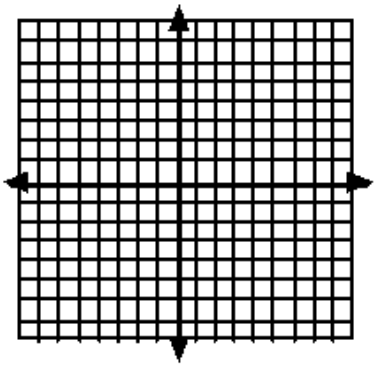
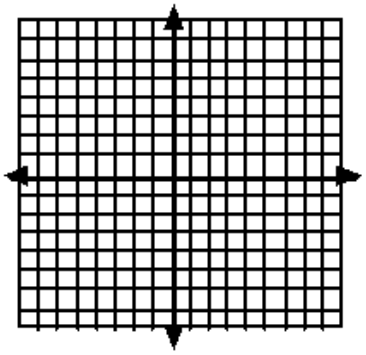
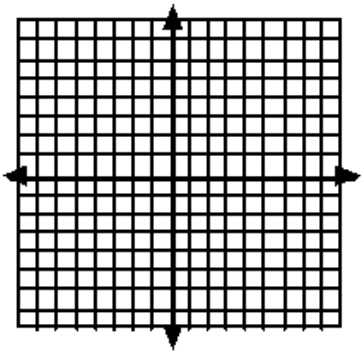
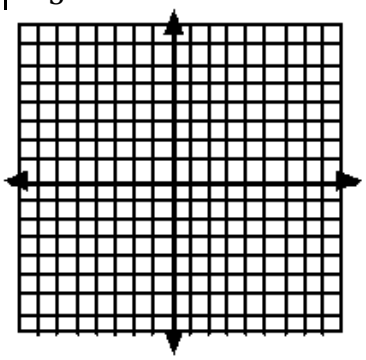
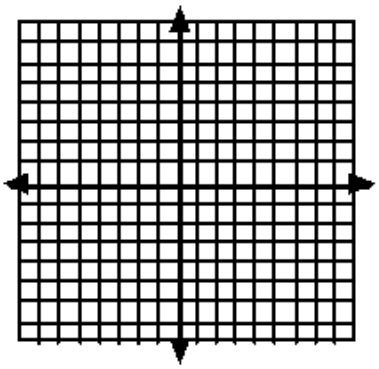
Transformation(s):

6. $f(x) = |x| - 2$

Vertex:



Transformation(s):

7. $f(x)=\lvert x+2\rvert-4$ Vertex:  Transformation(s):	8. $f(x)=-\lvert x+3\rvert$ Vertex:  Transformation(s):
9. $f(x)=\frac{1}{5}\lvert x\rvert$ Vertex:  Transformation(s):	10. $f(x)=3\lvert x\rvert$ Vertex:  Transformation(s):
11. $f(x)=2\lvert x\rvert-3$ Vertex:  Transformation(s)	12. $g(x)=\lvert x+1\rvert-3$ Vertex:  Transformation(s):

13. Write an absolute value equation based on the given vertex and it's transformation(s).

a. Vertex: (0, 4) Transformation: Horizontal shift left 2

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b. Vertex: (1, -5) Transformation: Vertical stretch by a factor of 3 and a reflection over the x axis.

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