Lesson 2.7 Worksheet
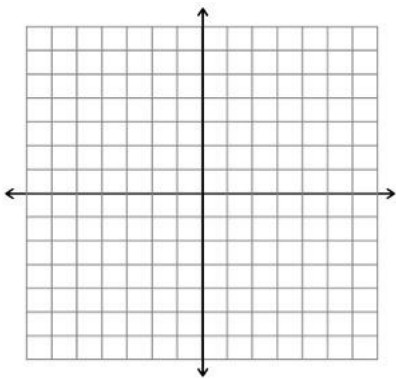
Name: _____

Graph the function. Identify the graph features. *Compare* the graph with the graph of $y = |x|$.

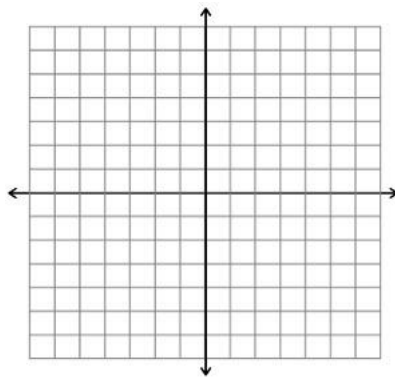1.) $y = |x + 2|$

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

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

vertex:

graph opens:

x				
y				

comparison(s):

vertex:

graph opens:

x				
y				
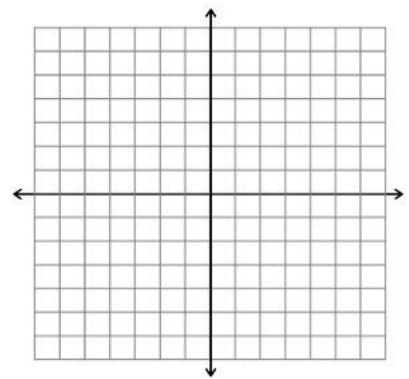
comparison(s):

vertex:

graph opens:

x				
y				

comparison(s):

4.) $f(x) = 2|x + 1| - 6$
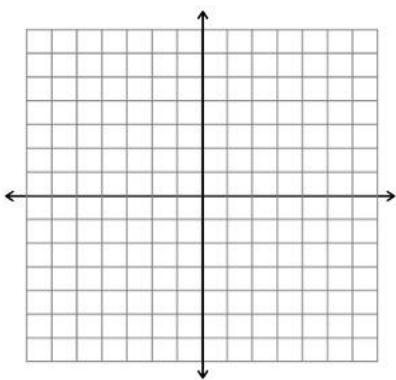
5.) $f(x) = -4|x + 2| + 5$
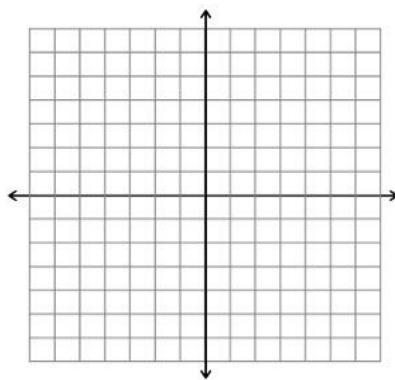
6.) $f(x) = -\frac{1}{2}|x - 1| + 5$

vertex:

graph opens:

x				
y				

comparison(s):

vertex:

graph opens:

x				
y				
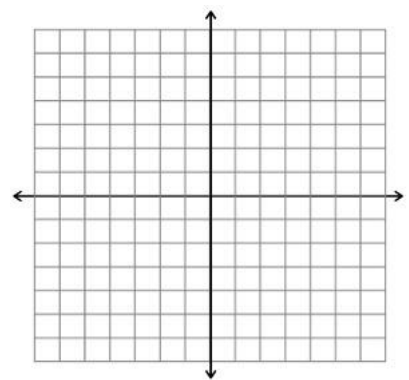
comparison(s):

vertex:

graph opens:

x				
y				

comparison(s):

Write an equation of the graph shown.

7.)

8.)

9.)
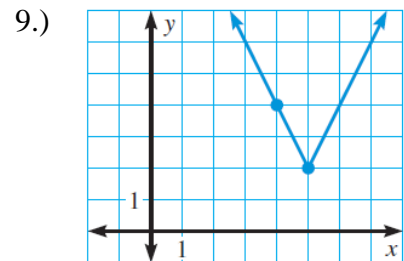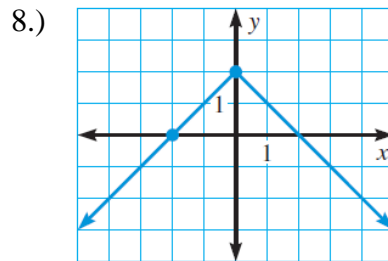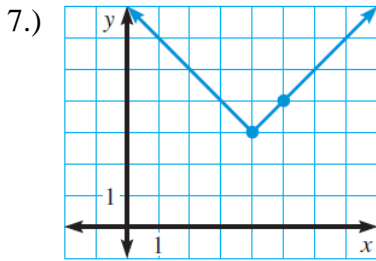
Write an equation of the line, in <u>slope-intercept form</u>, that satisfies the given conditions.

10.) through $(4, -1)$ and $(6, -7)$

11.) through $(7, 1)$; parallel to $y = -x + 3$

Find the *x*- and *y*-intercepts of the line with the given equation. Write your intercepts as ordered pairs.

12.) $x + 5y = -15$

13.) $2x - y = 10$

14.) $-6x + 8y = -36$

x-int: _____ *y*-int: _____   *x*-int: _____ *y*-int: _____   *x*-int: _____ *y*-int: _____

Tell whether the lines are *parallel*, *perpendicular*, or *neither*.

Graph the equation using any method. Be sure to identify the components used to graph (i.e. slope, x- or y-int.)

15.) Line 1: through $(-1, 4)$ and $(2, 5)$
Line 2: through $(-6, 2)$ and $(0, 4)$

16.) $-6x - 2y = -4$

lines are: _____