Name:_____   Period:_____

2.3 Analyzing Function Graphs:
Intercepts, Positive/Negative

Find the intercepts using algebra. Show all your work. Write your answers as ordered pairs.

1. $f(x) = 3x - 6$

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

3. $f(x) = -2x - 9$

x-intercept _____   *x*-intercept _____   *x*-intercept _____

y-intercept _____   *y*-intercept _____   *y*-intercept _____

4. $y = \dfrac{2}{3}x + 8$

5. $-3x + 7y = 6$

6. $-2x + 5y = -15$
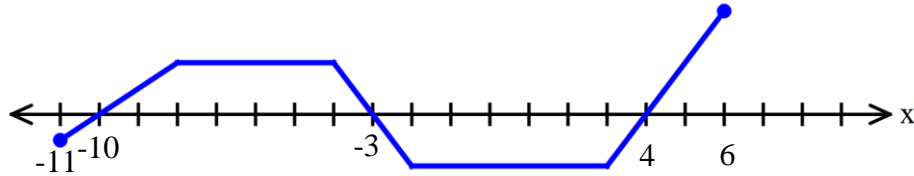
x-intercept _____   *x*-intercept _____   *x*-intercept _____

y-intercept _____   *y*-intercept _____   *y*-intercept _____

Color the positive and negative section(s) of the graph each a different color.
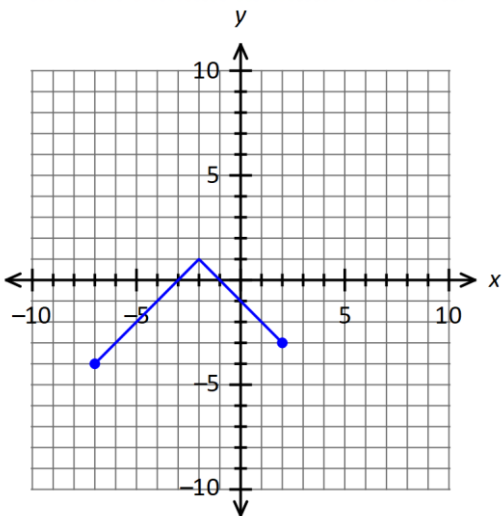

7. The positive section(s) are _____ color.   8. Write the positive interval(s):_____

9. The negative section(s) are _____ color.   10. Write the negative interval(s):_____

Color the positive and negative section(s) of the graph each a different color. Write the intervals in interval notation where the graph is positive and negative.
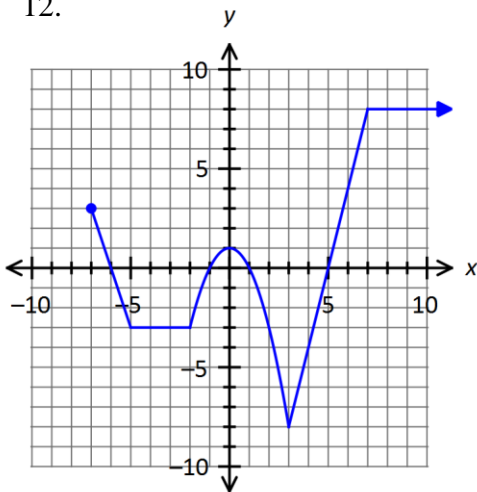
11.

a. The positive section(s) are _____ color.

b. Write the positive interval(s):_____

c. The negative section(s) are _____ color.

d. Write the negative interval(s):_____
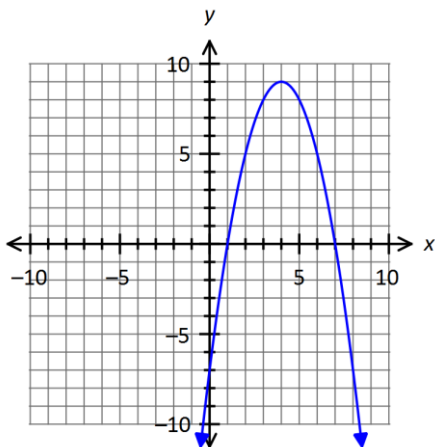
12.

a. The positive section(s) are _____ color.

b. Write the positive interval(s):_____

c. The negative section(s) are _____ color.

d. Write the negative interval(s):_____

Write the intercepts as ordered pairs. Write the intervals in interval notation where the graph is positive and negative.
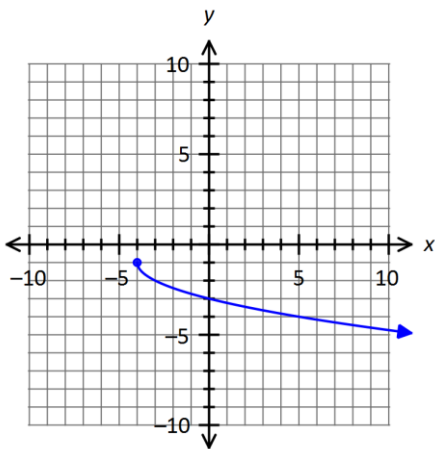
13. $f(x) = -x^2 + 8x - 7$

x-intercept(s):_____   y-intercept:_____
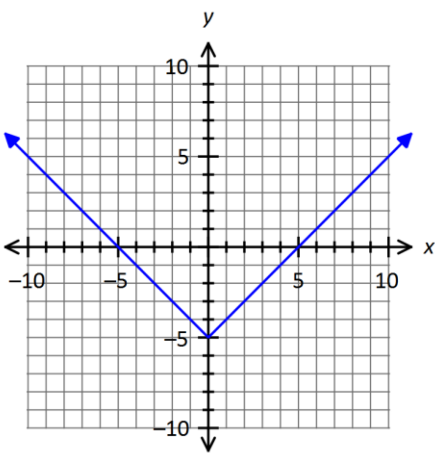
Positive: _____   Negative: _____

14. $f(x) = -\sqrt{x+4} - 1$

x-intercept(s):_____   y-intercept:_____
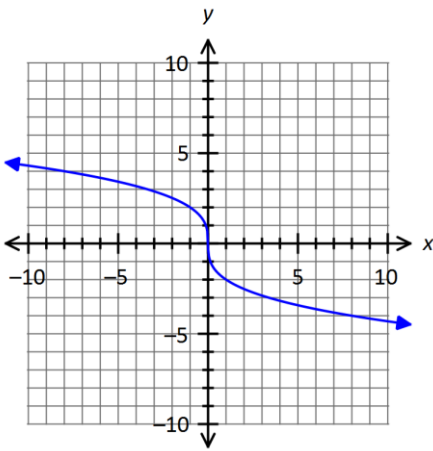
Positive: _____   Negative: _____

15. $g(x) = |x| - 5$

x-intercept(s):_____   y-intercept:_____

Positive: _____   Negative: _____
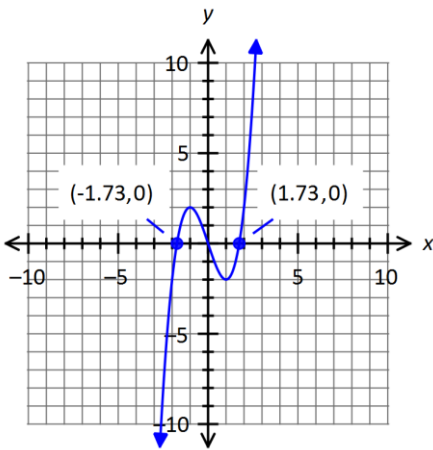
16. $g(x) = -2\sqrt[3]{x}$

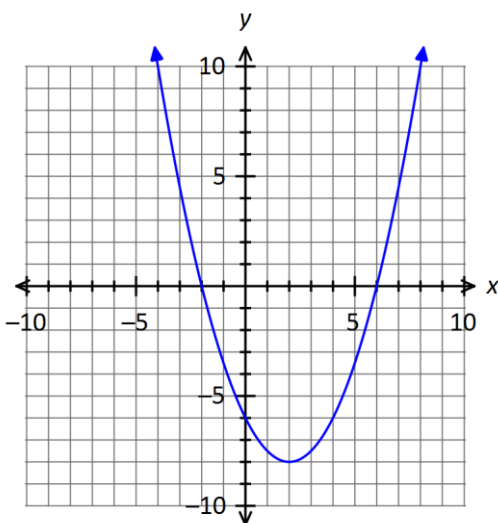x-intercept(s):_____   y-intercept:_____

Positive: _____   Negative: _____

17. $h(x) = x^3 - 3x$

(-1.73,0)   (1.73,0)

x-intercept(s):_____   y-intercept:_____

Positive: _____   Negative: _____

18. $f(x) = \dfrac{1}{2}(x-2)^2 - 8$

Domain:_____   Range:_____

x-intercept(s):_____   y-intercept:_____

Positive:_____   Negative:_____

Relative Maximum Point:_____ Value:_____

Relative Minimum Point:_____ Value:_____

Increasing:_____   Decreasing:_____

Constant:_____