

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

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

6. $-2x + 5y = -15$

x-intercept _____

x-intercept _____

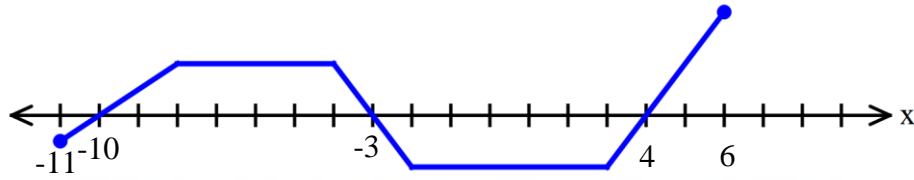
x-intercept _____

y-intercept _____

y-intercept _____

y-intercept _____

Mark the x -intercepts with a large dot. Color the positive and negative section(s) of the graph each a different color.



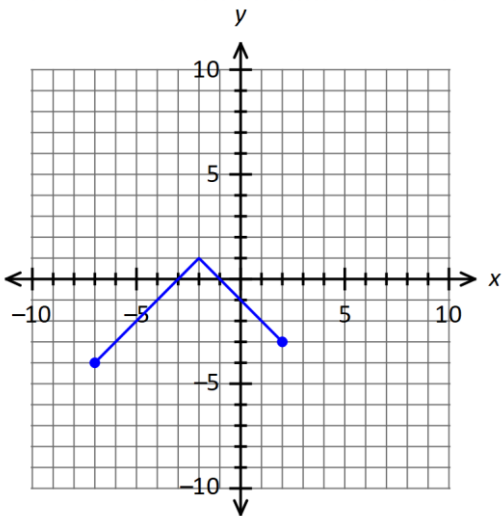
7. Draw a dotted line through the x -intercepts.

8. The positive section(s) are _____ color. 9. Write the positive interval(s): _____

10. The negative section(s) are _____ color. 11. Write the negative interval(s): _____

Mark the x -intercepts with a large dot. 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.

12.



a. Draw a dotted line through the x -intercepts.

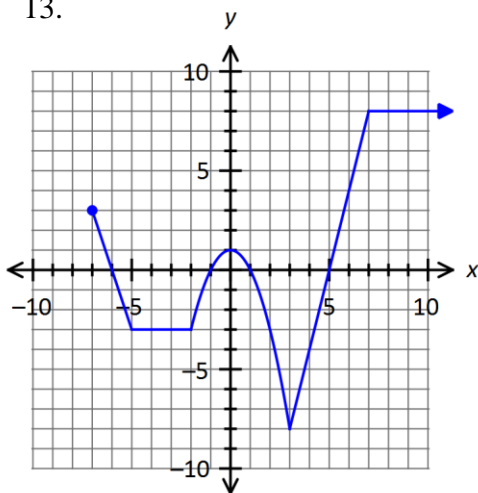
b. The positive section(s) are _____ color.

c. Write the positive interval(s): _____

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

e. Write the negative interval(s): _____

13.



a. Draw a dotted line through the x -intercepts.

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

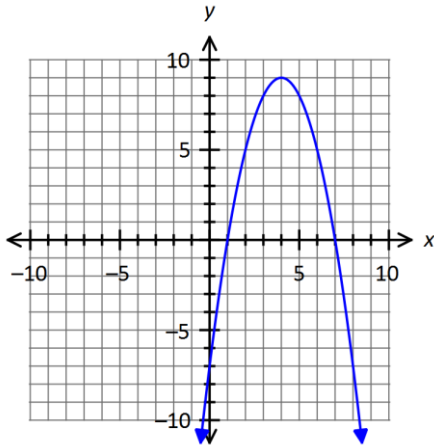
c. Write the positive interval(s): _____

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

e. Write the negative interval(s): _____

Write the intercepts as ordered pairs. Write the intervals in interval notation where the graph is positive and negative.

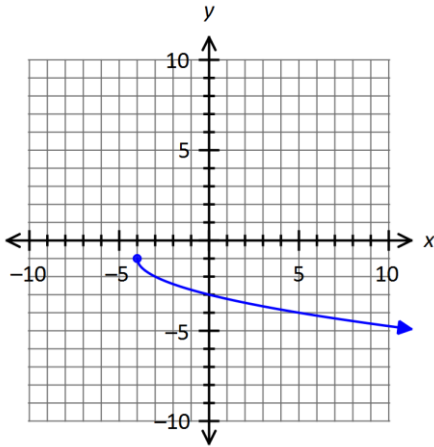
14. $f(x) = -x^2 + 8x - 7$



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

Positive: _____ Negative: _____

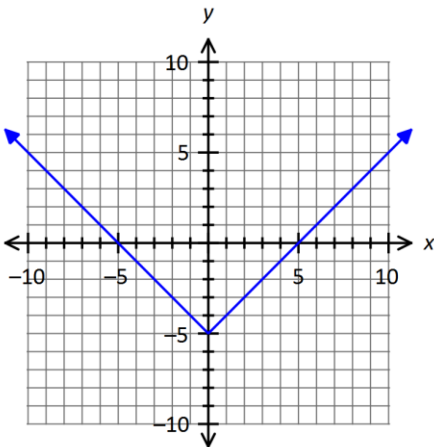
15. $f(x) = -\sqrt{x+4} - 1$



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

Positive: _____ Negative: _____

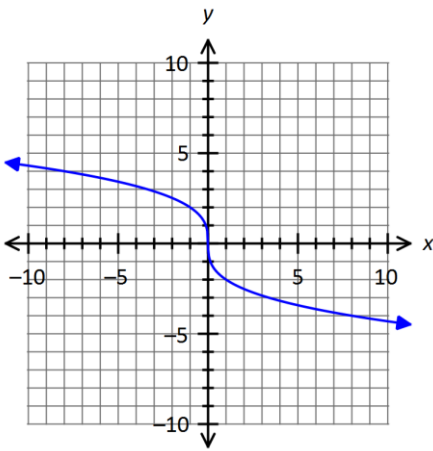
16. $g(x) = |x| - 5$



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

Positive: _____ Negative: _____

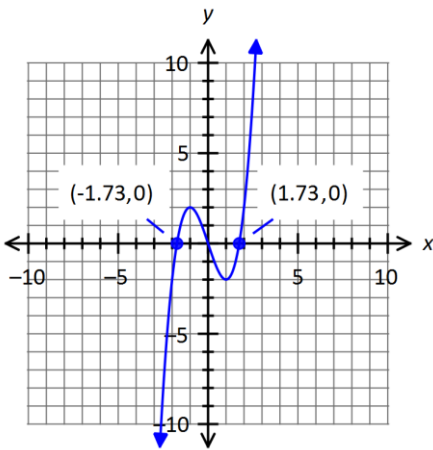
17. $g(x) = -2\sqrt[3]{x}$



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

Positive: _____ Negative: _____

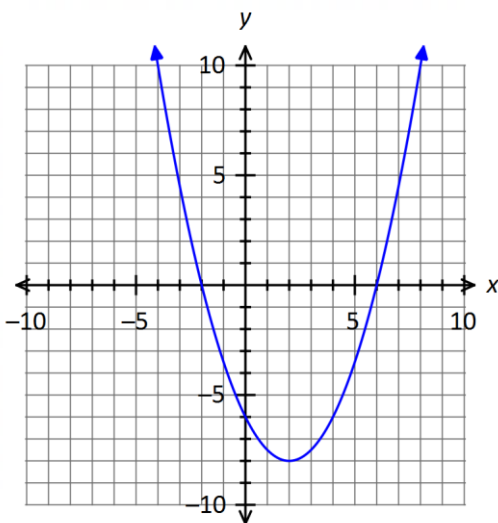
18. $h(x) = x^3 - 3x$



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

Positive: _____ Negative: _____

19. $f(x) = \frac{1}{2}(x-2)^2 - 8$



Domain: _____ Range: _____

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

Positive: _____ Negative: _____

Relative Maximum Point: _____ Value: _____

Relative Minimum Point: _____ Value: _____

Increasing: _____ Decreasing: _____

Constant: _____