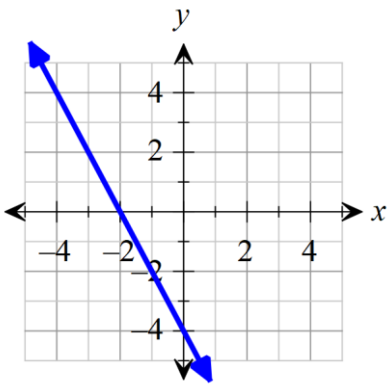
SM 2

Name:_____ Period:_____

SM2 Analyzing Functions Test Review

Find the intercepts of the given functions visually or algebraically. Write your answers as ordered pairs. You must show all your necessary work for full credit.

1. $f(x) = -2x - 4$



x-intercept:_____

y-intercept:_____

2. $6x - 5y = 30$

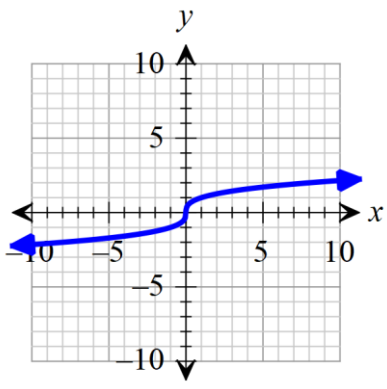
x-intercept:_____

y-intercept:_____

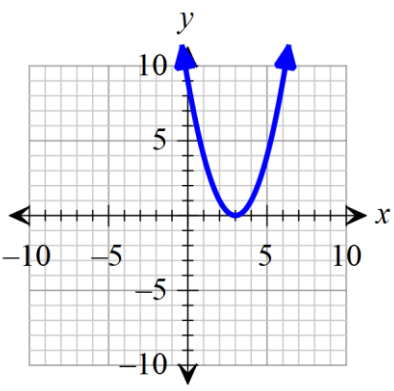
Match each of the following graphs with the type of symmetry that best describes it:

A. Even; Symmetric with respect to the *y*-axis
B. Odd; Symmetric with respect to the origin
C. No symmetry

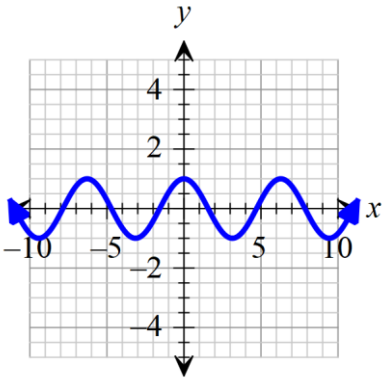
3.



4.

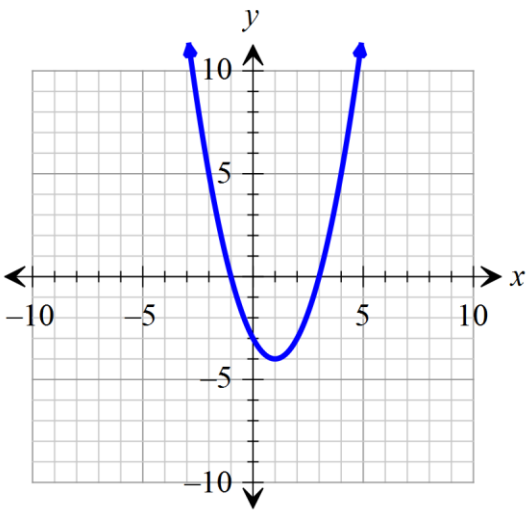


5.



Use the graph to find the domain, range, and intercepts. Then color the positive and negative section(s). Write the positive and negative intervals in interval notation.

6.



Domain:_____ Range:_____

x-intercepts:_____ *y*-intercept:_____

The positive section(s) are _____ color.

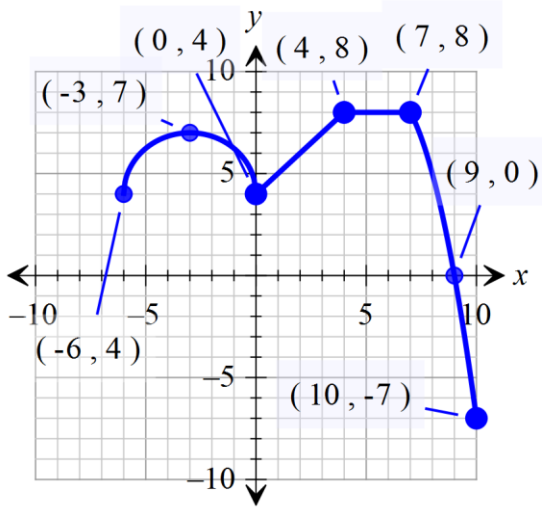
Positive interval(s):_____

The negative section(s) are _____ color.

Negative interval(s):_____

Color the increasing, decreasing, and constant section(s). Write the intervals where the function is increasing, decreasing, and constant in interval notation.

7.



The increasing section(s) are _____ color.

Increasing interval(s):_____

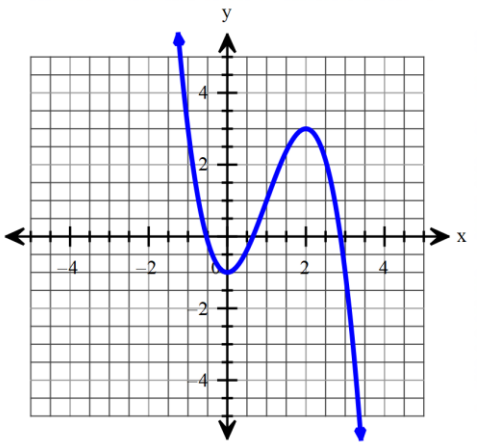
The decreasing section(s) are _____ color.

Decreasing interval(s):_____

The constant section(s) are _____ color.

Constant interval(s):_____

8. **Use the graph to find the relative maxima and minima.**



Relative Maximum point:_____

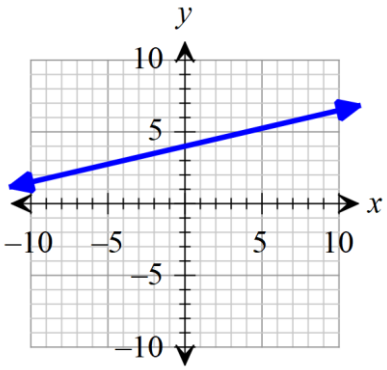
Relative Maximum value:_____

Relative Minimum point:_____

Relative Minimum value:_____

Find the end behavior of each function based on its graph. Write the answers as <u>limits</u>.

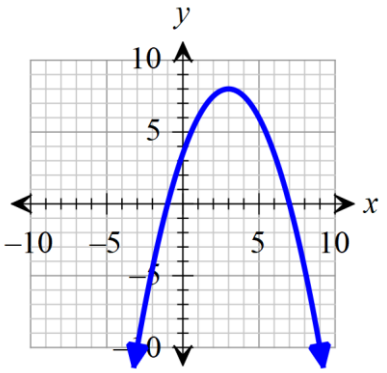
9.



Left End Behavior: $\lim_{x\to-\infty} f(x) =$ _____

Right End Behavior: $\lim_{x\to\infty} f(x) =$ _____

10.



Left End Behavior: $\lim_{x\to-\infty} f(x) =$ _____

Right End Behavior: $\lim_{x\to\infty} f(x) =$ _____