

Name: \_\_\_\_\_

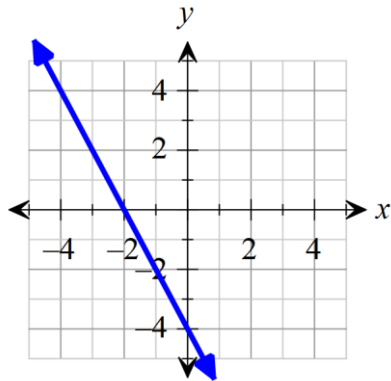
Period: \_\_\_\_\_

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

2.  $6x - 5y = 30$



x-intercept: \_\_\_\_\_

x-intercept: \_\_\_\_\_

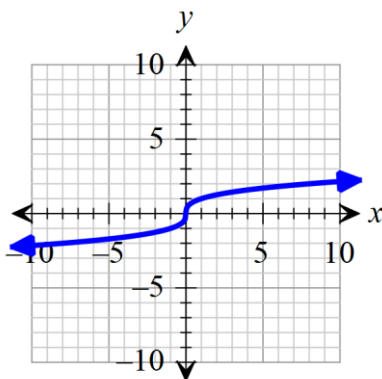
y-intercept: \_\_\_\_\_

y-intercept: \_\_\_\_\_

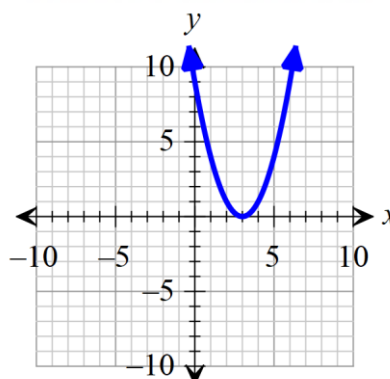
Match each of the following graphs with the type of symmetry that best describes it:

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

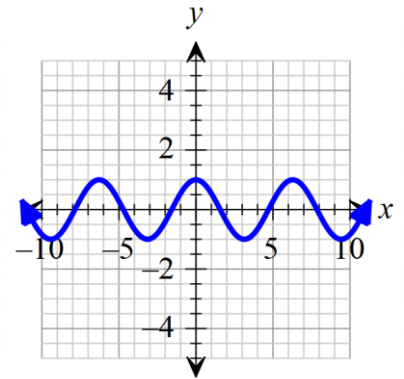
3.



4.

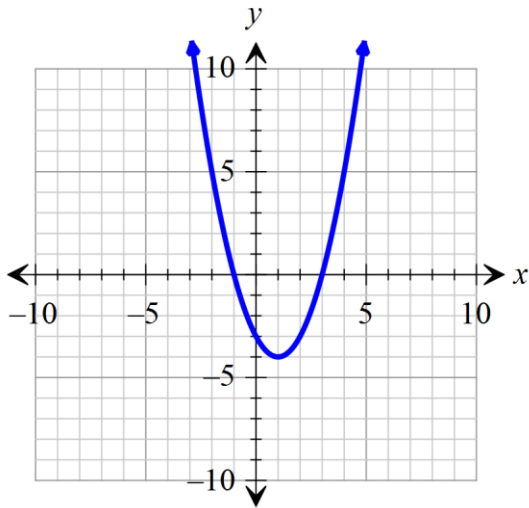


5.



Use the graph to find the domain, range, and intercepts. Then highlight 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.

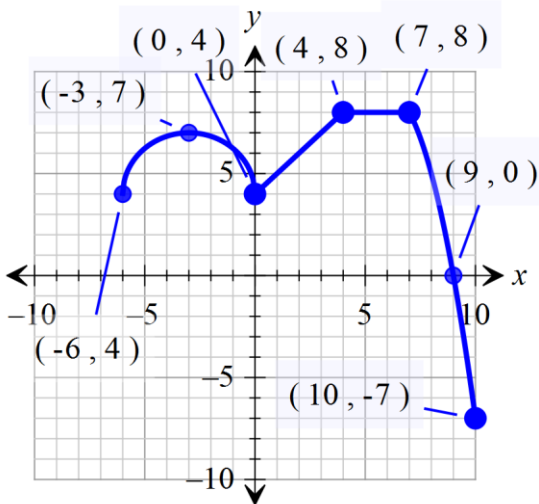
Positive interval(s): \_\_\_\_\_

The negative section(s) are \_\_\_\_\_ color.

Negative interval(s): \_\_\_\_\_

Highlight 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): \_\_\_\_\_

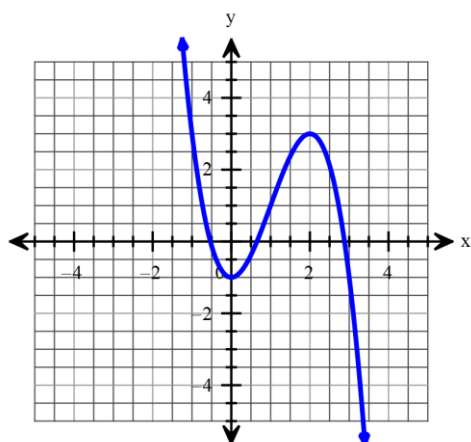
The decreasing section(s) are \_\_\_\_\_ color.

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: \_\_\_\_\_

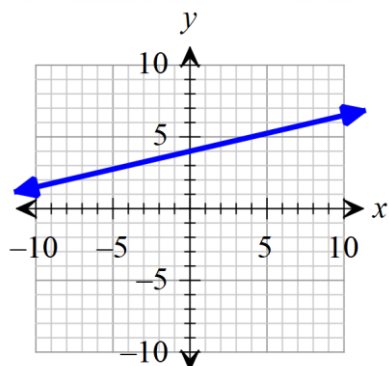
Relative Maximum value: \_\_\_\_\_

Relative Minimum point: \_\_\_\_\_

Relative Minimum value: \_\_\_\_\_

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

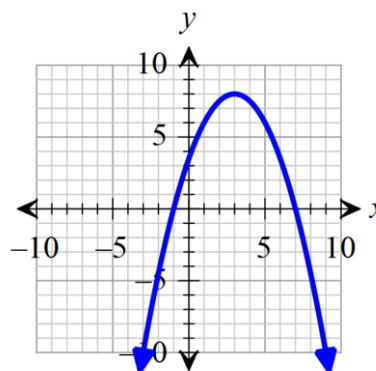
9.



Left End Behavior:  $\lim_{x \rightarrow -\infty} f(x) = \underline{\hspace{2cm}}$

Right End Behavior:  $\lim_{x \rightarrow \infty} f(x) = \underline{\hspace{2cm}}$

10.



Left End Behavior:  $\lim_{x \rightarrow -\infty} f(x) = \underline{\hspace{2cm}}$

Right End Behavior:  $\lim_{x \rightarrow \infty} f(x) = \underline{\hspace{2cm}}$