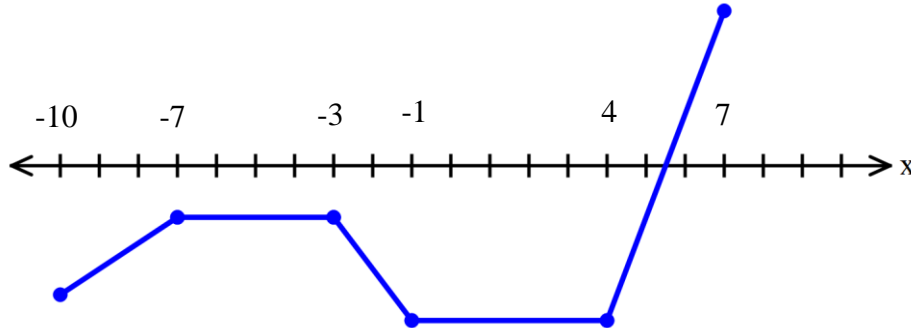


Name: \_\_\_\_\_ Period: \_\_\_\_\_

## 2.2 Analyzing Function Graphs: Maxima/Minima, Increasing/Decreasing/Constant

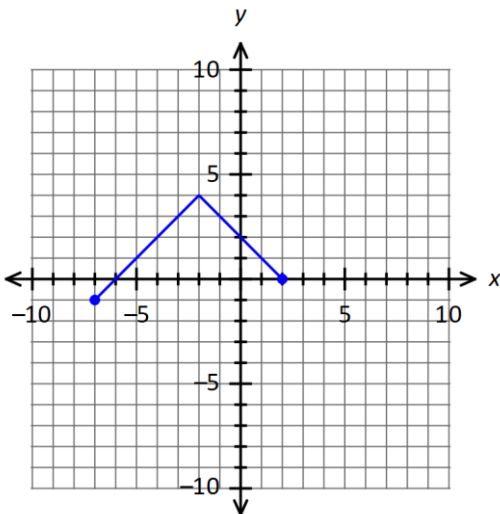
Color the increasing, decreasing, and constant section(s) of the graph each a different color.



1. The increasing section(s) are \_\_\_\_\_ color.
2. Write the increasing interval(s): \_\_\_\_\_
3. The decreasing section(s) are \_\_\_\_\_ color.
4. Write the decreasing interval(s): \_\_\_\_\_
5. The constant section(s) are \_\_\_\_\_ color.
6. Write the constant interval(s): \_\_\_\_\_

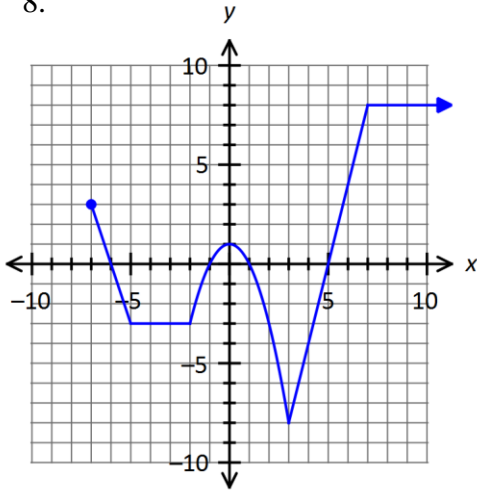
Color the increasing, decreasing, and constant section(s) of the graph each a different color. Write the intervals where the graph is increasing, decreasing, and constant in interval notation. If something is not applicable to the graph, write N/A.

7.



- a. The increasing section(s) are \_\_\_\_\_ color.
- b. Write the increasing interval(s): \_\_\_\_\_
- c. The decreasing section(s) are \_\_\_\_\_ color.
- d. Write the decreasing interval(s): \_\_\_\_\_
- e. The constant section(s) are \_\_\_\_\_ color.
- f. Write the constant interval(s): \_\_\_\_\_

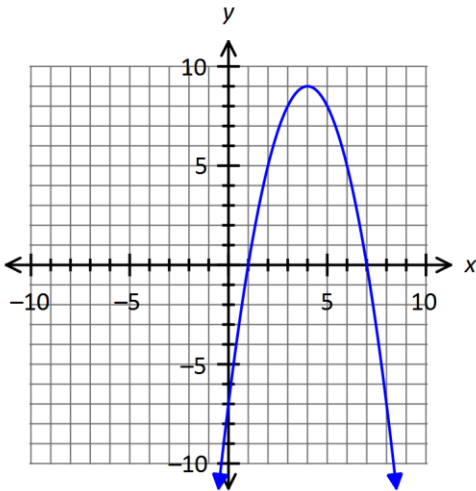
8.



- The increasing section(s) are \_\_\_\_\_ color.
- Write the increasing interval(s): \_\_\_\_\_
- The decreasing section(s) are \_\_\_\_\_ color.
- Write the decreasing interval(s): \_\_\_\_\_
- The constant section(s) are \_\_\_\_\_ color.
- Write the constant interval(s): \_\_\_\_\_

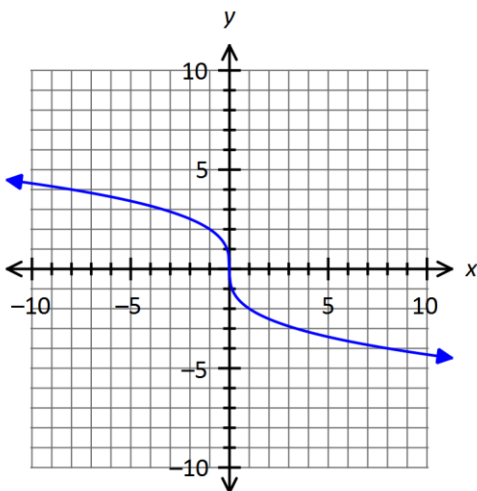
**Write the domain and range in interval notation. Write the maximum and minimum points as ordered pairs and the values as the  $y$  – coordinate. Write the intervals where the graph is increasing, decreasing, and constant in interval notation. If something is not applicable to the graph, write N/A.**

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



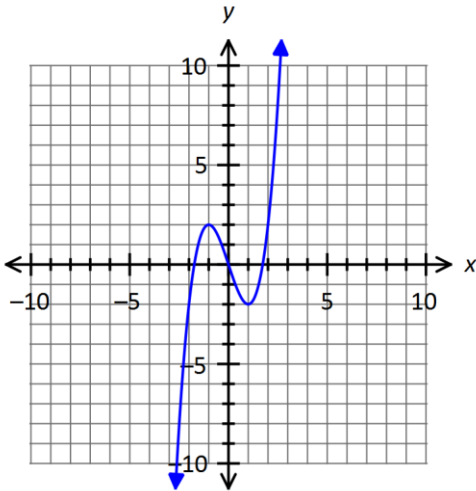
- Domain: \_\_\_\_\_ Range: \_\_\_\_\_
- Relative Maximum Point: \_\_\_\_\_ Value: \_\_\_\_\_
- Relative Minimum Point: \_\_\_\_\_ Value: \_\_\_\_\_
- Increasing: \_\_\_\_\_ Decreasing: \_\_\_\_\_
- Constant: \_\_\_\_\_

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



- Domain: \_\_\_\_\_ Range: \_\_\_\_\_
- Relative Maximum Point: \_\_\_\_\_ Value: \_\_\_\_\_
- Relative Minimum Point: \_\_\_\_\_ Value: \_\_\_\_\_
- Increasing: \_\_\_\_\_ Decreasing: \_\_\_\_\_
- Constant: \_\_\_\_\_

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



Domain: \_\_\_\_\_ Range: \_\_\_\_\_

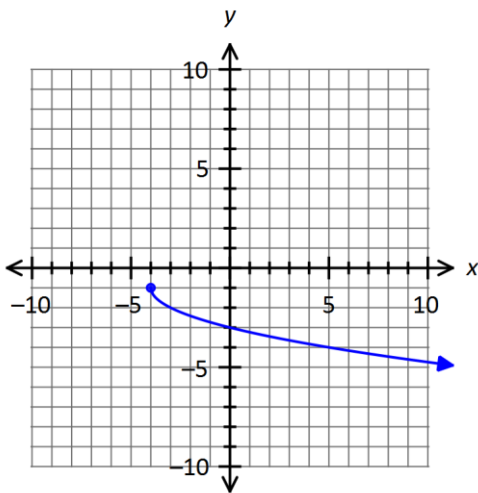
Relative Maximum Point: \_\_\_\_\_ Value: \_\_\_\_\_

Relative Minimum Point: \_\_\_\_\_ Value: \_\_\_\_\_

Increasing: \_\_\_\_\_ Decreasing: \_\_\_\_\_

Constant: \_\_\_\_\_

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



Domain: \_\_\_\_\_ Range: \_\_\_\_\_

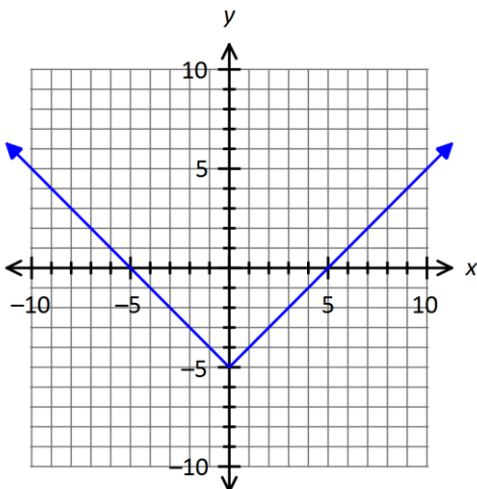
Relative Maximum Point: \_\_\_\_\_ Value: \_\_\_\_\_

Relative Minimum Point: \_\_\_\_\_ Value: \_\_\_\_\_

Increasing: \_\_\_\_\_ Decreasing: \_\_\_\_\_

Constant: \_\_\_\_\_

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



Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Relative Maximum Point: \_\_\_\_\_ Value: \_\_\_\_\_

Relative Minimum Point: \_\_\_\_\_ Value: \_\_\_\_\_

Increasing: \_\_\_\_\_ Decreasing: \_\_\_\_\_

Constant: \_\_\_\_\_