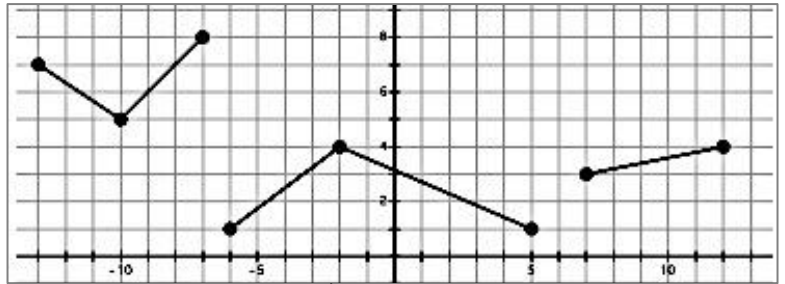


# 6R Features of Functions REVIEW

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

SHOW YOUR WORK AND WORK IN PENCIL

For the graph right state the **absolute minimum / maximum** and then **the relative minimum / maximum** over the given **interval (x-values)**.



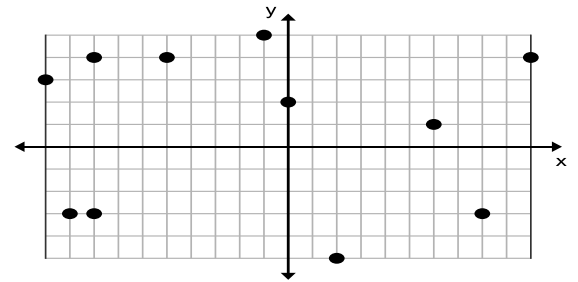
1. What is the Absolute Minimum Point of the graph? \_\_\_\_\_
2. What is the Absolute Maximum Point of the graph? \_\_\_\_\_

3. On the interval from  $[-13, -7]$ 
  - a. Relative minimum \_\_\_\_\_
  - b. Relative maximum \_\_\_\_\_

4. On the interval from  $[-6, 5]$ 
  - a. Relative minimum \_\_\_\_\_
  - b. Relative maximum \_\_\_\_\_

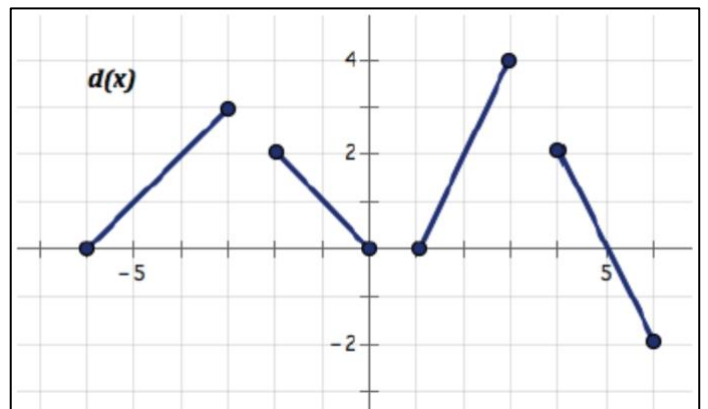
5. On the interval from  $[7, 12]$ 
  - a. Relative minimum \_\_\_\_\_
  - b. Relative maximum \_\_\_\_\_

Use the graph right for #6-#10.



6. What is the absolute minimum? \_\_\_\_\_
7. What is the absolute maximum? \_\_\_\_\_
8. Is the graph Continuous or Discrete? \_\_\_\_\_
9. From  $[-10, 2)$ , what is the relative max? \_\_\_\_\_ Min? \_\_\_\_\_
10. From  $[4, 10]$ , what's the relative max? \_\_\_\_\_ Min? \_\_\_\_\_

11. Answer the questions based on the graph.
  - a. Function? YES/NO
  - b. Discrete, Continuous, Discontinuous
  - c. Domain: \_\_\_\_\_
  - d. Range: \_\_\_\_\_
  - e. Absolute Max: \_\_\_\_\_
  - f. Relative Max over  $[-6, 2]$ : \_\_\_\_\_
  - g. Circle where it's increasing most quickly  
Explain \_\_\_\_\_
  - h. Circle where it decreases most quickly



Evaluate the functions at the given numbers:

12.  $f(x) = 15 + 2x$

- a.  $f(-1) =$
- b.  $f(0) =$
- c.  $f(10) =$
- d.  $f(x) = -25$

13.  $f(x) = -8 - 2x$

- a.  $f(2) =$
- b.  $f\left(\frac{1}{2}\right) =$
- c.  $f(4) =$
- d.  $f(x) = -10$

14. Determine if the relationship for each graph represents a function. Describe the key features listed.

REMEMBER: When asked for increasing/decreasing it should be stated over an interval (domain values)

<p>a.</p>	<p>Function? _____</p> <p>Increasing: _____</p> <p>Decreasing: _____</p> <p>Absolute Max: _____</p> <p>Absolute Min: _____</p> <p>Rel. Min [0,4]: _____</p> <p>Domain: _____</p> <p>Range: _____</p> <p>What is <math>f(1)</math>? _____</p>	<p>b.</p>	<p>Function? _____</p> <p>Increasing: _____</p> <p>Decreasing: _____</p> <p>Absolute Max: _____</p> <p>Absolute Min: _____</p> <p>Domain: _____</p> <p>Range: _____</p> <p>What is <math>f(3)</math>? _____</p>
<p>c.</p>	<p>Function? _____</p> <p>Increasing: _____</p> <p>Decreasing: _____</p> <p>Absolute Max: _____</p> <p>Absolute Min: _____</p> <p>Domain: _____</p> <p>Range: _____</p> <p>What is the domain if there were arrows on both sides? _____</p>	<p>d.</p>	<p>Function? _____</p> <p>Increasing: _____</p> <p>Decreasing: _____</p> <p>Absolute Max: _____</p> <p>Absolute Min: _____</p> <p>Domain: _____</p> <p>Range: _____</p> <p>What is <math>f(-1)</math>? _____</p>
	<p>Function? _____</p> <p>Maximum value: _____</p> <p>Minimum value: _____</p> <p>What is <math>f(1)</math>: _____</p> <p>What is <math>f(-6)</math>: _____</p> <p>x-intercept: _____</p> <p>y-intercept: _____</p>	<p>Continuous or Discrete _____</p> <p>Increasing on interval: _____</p> <p>Decreasing on interval: _____</p>	

15. Mrs. Packer is selling bracelets at \$2.00 each and earrings at \$3.00 each to make extra money go to Disneyland. She needs to make at least \$600. She only has enough material to make at most 250 bracelets and/or earrings.

a. Write a system of inequalities for the situation

\_\_\_\_\_

b. Find your intercepts.

c. Solve the system by graphing. (Mark your scale to fit the data.)

