

Math 3 Unit 1 Review Sheet

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



Use the graph to the left to answer the following questions:

|                          |  |
|--------------------------|--|
| Domain                   |  |
| Range                    |  |
| Maximum                  |  |
| Minimum                  |  |
| Increase                 |  |
| Decrease                 |  |
| Decrease                 |  |
| Constant                 |  |
| x-int(s)                 |  |
| y-int                    |  |
| Continuous?              |  |
| $f(5) =$                 |  |
| Find x if $f(x + 4) = 2$ |  |

Find the PW equation for the graph above.

Solve for the unknown variable.

a.  $|4x + 3| = 19$       b.  $-3|x + 3| - 2 = -5$       c.  $|x + 12| > 3$       d.  $-2|x + 1| - 1 < -11$

Write the equation of the absolute value function given the PW function's equation.

e. 
$$\begin{cases} (x + 3) - 1, & x > -3 \\ -(x + 3) - 1, & \leq -3 \end{cases}$$

f. 
$$\begin{cases} -(x + 9) - 3, & x > -9 \\ (x + 9) - 3, & x \leq -9 \end{cases}$$

g. 
$$\begin{cases} 2x - 7, & x > 5 \\ -2x + 13, & x \leq 5 \end{cases}$$

h. 
$$\begin{cases} (x + 6)^2 + 7, & x > -6 \\ -(x + 6)^2 + 7, & x \leq -6 \end{cases}$$

i. 
$$\begin{cases} (x - 4)^2 + 1, & x > 4 \\ -(x - 4)^2 + 5, & x \leq 4 \end{cases}$$

Make sure you would be able to graph a - i