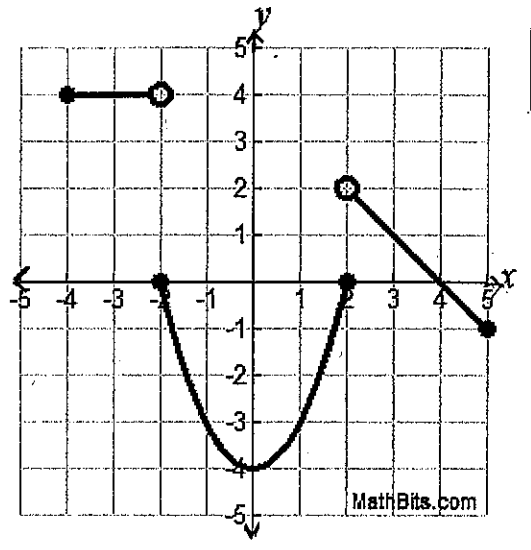


Name Key  
8A: Algebra 1

Date \_\_\_\_\_  
Period \_\_\_\_\_

Homework

Answer the following questions based on the provided graph.



1) Find the following values:

$f(-4) = \underline{4}$        $f(-2) = \underline{0}$        $f(0) = \underline{-4}$        $f(2) = \underline{0}$

$\uparrow$              $\uparrow$   
 $x$              $y$

2) What are the x-intercepts of the function?  $x = -2, x = 2, x = 4$  or  $\{-2, 2, 4\}$

3) What are the y-intercepts of the function?  $y = -4$  or  $\{-4\}$

4) What is the absolute extreme maximum?  $y = 4$  or  $\{4\}$

Relative: Doesn't exist

5) What is the absolute extreme minimum?  $y = -4$  or  $\{-4\}$  or  $(0, -4)$

Relative:  $y = -4$

For questions 6-8: give your answer in interval notation

6) Find the intervals on which the function is increasing.  $(0, 2)$

7) Find the intervals on which the function is decreasing.  $(-2, 0) \cup (2, 5)$

8) Find the interval on which the function is constant.  $[-4, -2)$

9) Is the graph continuous or discontinuous? Discontinuous

points  $x = -2$  &  $x = 2$  o b/c that is where the jump/break happens  
in the graph o b/c you have to pick up your pencil to trace it

10) What is the average rate of change on the interval  $[-2, 0]$ ?  $-2$

$$\frac{f(x_2) - f(x_1)}{x_2 - x_1}$$

$$\frac{f(0) - f(-2)}{0 - (-2)}$$

$$\frac{-4 - 0}{0 - (-2)} = \frac{-4}{2} = \boxed{-2}$$