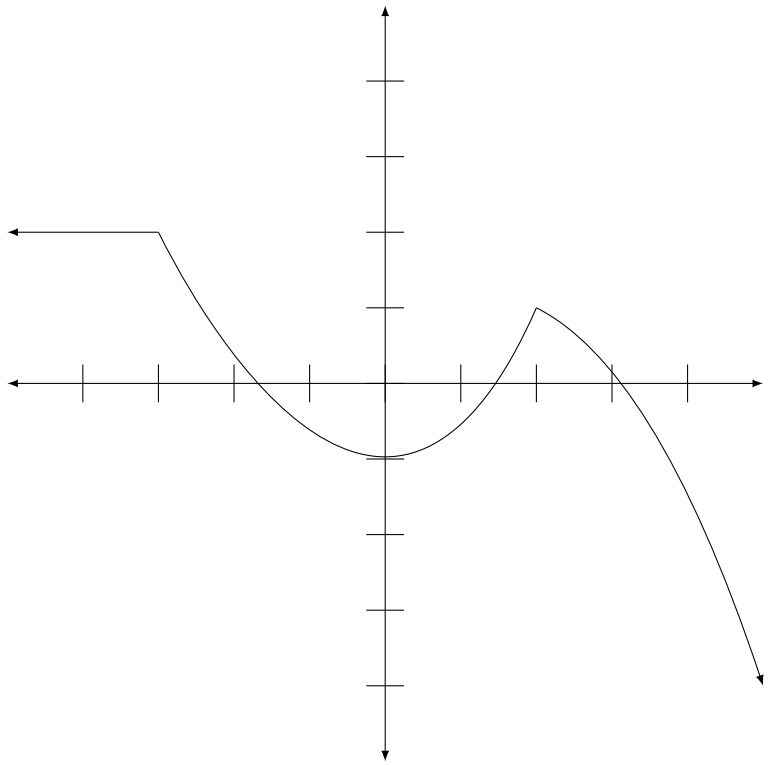
Name _____

Quiz 9

1. Use the following graph of the function $f(x)$ to answer the questions.



a) Find the relative maximum(s) $\underline{x = 2}$
b) Find the relative minimum(s) $\underline{x = 0}$
c) Find the relative maximum value(s) $\underline{1}$
d) Find the relative minimum value(s) $\underline{-1}$
e) Where is $f(x)$ increasing? $\underline{(0, 2)}$
f) Where is $f(x)$ decreasing? $\underline{(-3, 0) \cup (2, \infty)}$
g) $f(2) = \underline{1}$
h) $f(-4) = \underline{2}$

2. Let $f(x) = 2x - 4$ and $g(x) = x^2$. Find...

a) $(f + g)(2)$ = $\underline{(f(2) + g(2) = 0 + 4 = 4}$
b) $(f \circ g)(2)$ = $\underline{f(g(2)) = f(4) = 4}$

3. Graph the following piecewise function on the axes provided

$$g(x) = \begin{cases} -|x| & x < 1 \\ -2x + 4 & x \geq 1 \end{cases}$$