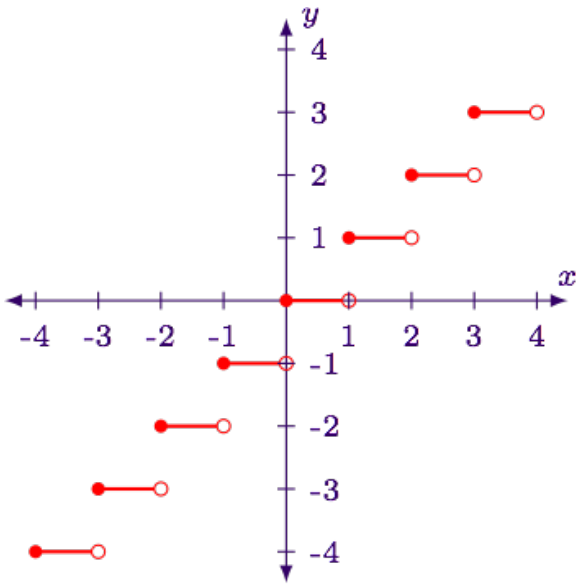
Name:_____ **Quiz 2: September 6**

Let f be the *greatest integer function* $f(x) = [x]$ we saw in class. Let g be the function $g(x) = 1/x$, and h be the absolute value function $h(x) = |x|$. As always, show your work.

1. The graph $y = f(x)$ is reproduced below.



   (a) What are the x-intercepts of $y = f(x)$?

   (b) Which of f, g, and h are even functions?

   (c) Which of f, g, and h are odd functions?

2. (a) Write an algebraic expression for $f \circ g$ and $g \circ f$.

   (b) What is the domain of $g \circ f$? (Per usual, express your answer in interval notation.)

3. Children who grow up in houses with books typically perform well on the SAT. Take $b(x)$ to be a function whose input is "number of books in house" and output is "expected SAT score."

   (a) What are the two types of local extrema? (Just tell me the words from class.)

   (b) What does each type of local extremum mean, in the context of this function b?