Name:_____

Math 105: Fall 2013
Quiz 1: September 13

Good Luck!

1. Suppose that $p(x)$ is a polynomial of degree 9. Is it possible that $p(x) \leq 13$ for all x? Why or why not?

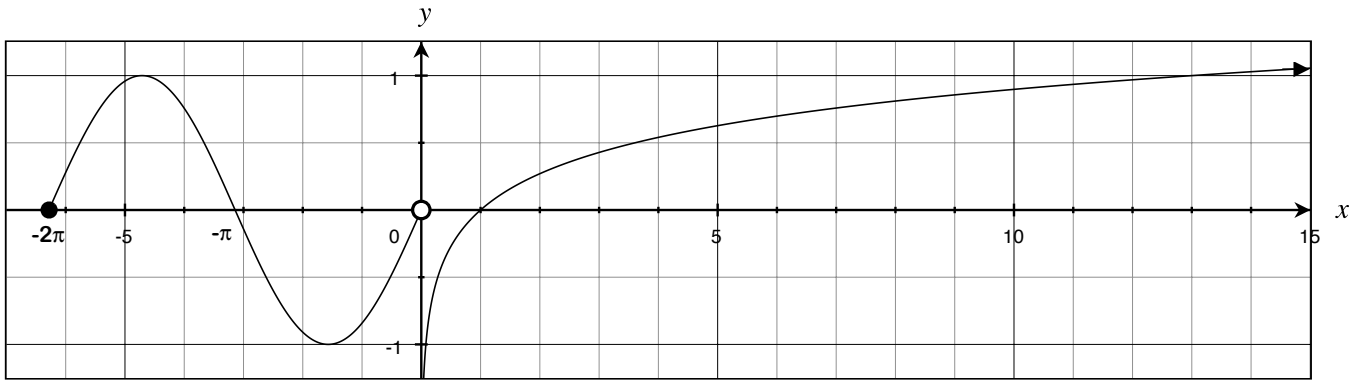
2. Give the domain of the following functions.

   (a) $f(x) = x - 13$

   (b) $g(x) = (\sqrt{x - 13})^2$

   (c) $h(x) = \dfrac{x^2 - 169}{x + 13}$

3. Write a possible formula for $f(x)$, the piecewise function graphed below.



note: the curve on the right side does NOT intersect the y-axis

4. Consider the graph of $f(x)$ above. For which values of x is $f(x)$ concave down?