

Math 105 Quiz 1

§1.1-§1.4

Name:

Show all work for credit.

1. Give the domain and range of the following functions:

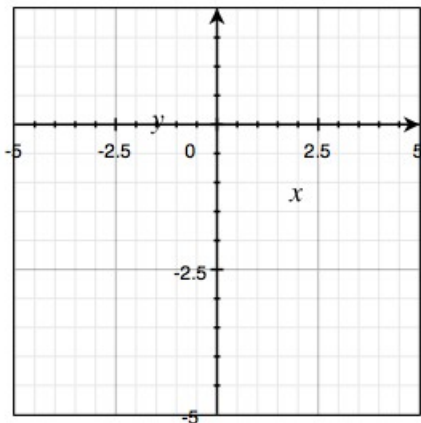
(a)  $f(x) = (x + 1)$

(b)  $g(x) = (\sqrt{x + 1})^2$

(c)  $h(x) = \frac{x^2 - 1}{x - 1}$

Are these functions the same function? Why or why not?

2. Draw a graph of a function on the interval  $[-5,5]$  which is increasing and negative throughout the interval but changes concavity somewhere in the interval.



3. Let  $f(x)$  be an even function,  $g(x)$  be an odd function, and  $h(x)$  be a periodic function with period=4.

(a) Suppose  $f(2) = 5$ , what is  $f(-2)$ ?

(b) Suppose  $g(2) = 5$ , what is  $g(-2)$ ?

(c) Suppose  $h(2) = 5$ , what is  $h(-2)$ ?