August 31, 2020 Lesson 1.3 Functions Name:

Instructions: Watch the video entitled "Lesson 1.3: Functions" then complete the questions below. Upload a scanned copy to Blackboard for participation credit.

1. What is the definition of a function?

2. Give an example of a real-world relationship that is a function.

3. Give an example of a real-world relationship that is **NOT** a function.

4. How can you tell whether or not a graph represents a function?

5. Let $f(x) = x^2 + 2x + 1$

   (a) Find $f(4)$.

   (b) Find and simplify $f(3 + h)$.

6. Find the domains of the following functions. [Hint: a good way to start is to think "what numbers are not in the domain – what numbers wouldn't make sense to plug in for x?]

   (a) $f(x) = \frac{x+4}{x-3}$

   (b) $g(x) = \sqrt{x - 4}$