MATH 348 Reading Questions

Chapters 1 and 2 NAME

Read pages 1–14 in the Essential Topology *textbook and answer the following questions. This sheet will be checked for completeness at the beginning of the next class.*

1. What concept or example in Chapter 1 do you find most interesting or are you most curious about?

2. How can the notion of a continuous function $f : \mathbb{R} \to \mathbb{R}$ be expressed using sequences?[1]

3. What is the <u>definition</u> of *continuity of a function f at a point a*?

4. What is the definition of an *open set* of real numbers?

5. What is the definition of an *closed set* of real numbers?

6. If f is a function and you encounter the notation $f^{-1}(S)$ in the text, does this mean that f is an *invertible* function? Explain.

[1] The most common notation for the real numbers is $\mathbb{R}$, but our text uses $\mathbf{R}$ instead.