

MATH 348 Reading Questions

Section 4.1

NAME

Read the Interlude (pages 35–36) and Section 3.4 in the textbook. Answer the following questions. This sheet will be checked for completeness at the beginning of the next class.

1. According to the *Interlude*, most of the tools that we use in studying topology can be grouped into what two categories?
2. What is a *topological invariant*?
3. Rephrase Theorem 4.1 in your own words, avoiding jargon or symbols that you don't understand.
4. What is the definition of a *disconnected* topological space?
5. Sketch a diagram that illustrates Theorem 4.6.
6. For what values of n is the n -sphere S^n connected? Why?