MATH 348 Reading Questions

Section 6.2 NAME

Re-read Section 6.1, and then read Section 6.2 of our textbook. Answer the following questions. This sheet will be checked for completeness at the beginning of the next class.

1. What does the notation $[S, T]$ mean?

2. What does it mean for two spaces to be **homotopy equivalent**?

3. How are the concepts of *homeomorphic* and *homotopy equivalent* related?

4. What does it mean for a space to be **contractible**? Give examples of at least two contractible spaces.

5. Can a connected space be homotopy equivalent to a disconnected space? Explain.

6. Can a compact space be homotopy equivalent to a non-compact space? Explain.