

# MATH 348 Reading Questions

Sections 3.1–3.2

\_\_\_\_\_ NAME

*Read Sections 3.1 and 3.2 in the textbook, at least through Example 3.24 on page 24. Answer the following questions. This sheet will be checked for completeness at the beginning of the next class.*

1. What four rules must be satisfied by the *open* sets of a topological space?
2. What two topologies exist on any set  $S$ ?
3. What is the definition of a *continuous* function from one topological space to another?
4. Give one example of a topology on  $\mathbb{R}^2$ .
5. What is a *metric space*?
6. What is the *subspace topology*?