

MATH 348 Reading Questions

Sections 4.1–4.2

NAME

Re-read Section 4.1, and read Section 4.2 at least through the proof of Proposition 4.21. Answer the following questions. This sheet will be checked for completeness at the beginning of the next class.

1. If S is a connected space, T is a discrete space, and $f : S \rightarrow T$ is a continuous map, then what can you conclude about f ?
2. How does the proof of Theorem 4.6 rely on a surjective map from $[0, 1]$ to S^0 ?
3. Restate Theorem 4.7 in your own words. Have you seen this theorem before? In what math class did you see it?
4. What does it mean if a function is *bounded*?
5. What is a *finite refinement* of an open cover?
6. What does it mean if a topological space is *compact*?