

# REAL ANALYSIS

## MATH 205/H140, HW#7

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Chapter 7, exercises 18, 29, 30, 34, 35, 42, 47, 50, 51, and the following problem:

### Problem 1.

For each of the following statements determine whether it is true or false. Explain your answers.

- a) Completion of a bounded metric space is bounded.
- b) Completion of a totally bounded metric space is totally bounded.
- c) Completion of a separable metric space is separable.
- d) Completion of a countable metric space is countable.