MATH 4433   **Homework 8**   **Due 4/11/17 (Tuesday)**

Abbott, Section 4.2:

Exercises 4.2.5(a,c,d), 4.2.6, 4.2.7, 4.2.9 (pages 121, 122).

Remarks and hints:

- Exercise 4.2.7: You are only allowed to use Definition 4.2.1!

Abbott, Section 4.3:

Exercise 4.3.1, 4.3.5, 4.3.9, 4.3.11, 4.3.13 (pages 126–129).

Remarks and hints:

- Exercise 4.3.1: You are only allowed to use Definition 4.3.1!

- Exercise 4.3.5: The proof is very simple! Incidentally, this problem implies that every sequence (a_n), considered as a function $a : \mathbb{N} \to \mathbb{R}$, is continuous.

- Exercise 4.3.9: The simplest way to prove this is to use the characterization of continuity by limits of sequences (Theorem 4.3.2(iii)).