Assignment 11

The problems on this assignment are for your benefit only; none of them will be collected. Solutions will eventually be posted. A few more problems will be posted later.

Exercises from Abbott, *Understanding Analysis*:

Section 5.3: 3, 4, 6, 8, 12

Section 6.2: 2, 3 (see comment below), 6, 7, 8, 9

More exercises from Abbott: 6.2.10–15 (see below)

Comments, hints and instructions:

6.2.3 (c): Rather than trying to figure out what Abbott is asking, do something specific: Determine on precisely which subintervals of $[0, \infty)$ the convergence is uniform. Prove that convergence is indeed uniform on the intervals you specify, and not an any other intervals.

6.2.10–15: These are interesting results but make very challenging problems. If I were going to hold you responsible for the material I would teach it, not leave it as exercises. I list them above so that, if you are inclined, you can take a look. The Arzela-Ascoli Theorem (Exercises 13–15) is particularly important.