

## Assignment 2

**Turn in starred problems Wednesday, February 1,** at the beginning of the period. See the remarks below for hints or modifications of several of these problems.

Exercises from Abbott, *Understanding Analysis*:

Section 1.5: 2, 3, 4 (b,c)\*, 5, 6, 7\*, 8\*, 9\*

Section 1.6: 4\*, 9\*, 10

**Optional extra credit problem; turn in in lecture Thursday 2/02:** Abbott 1.5.11. For an extra credit problem, please to not consult any sources or work with other students.

Remarks, hints, and further instructions:

5.3 We will prove part (b) of Theorem 1.5.3 in class 1/26; I am putting this problem on the list just so you can think about another proof.

5.4 We will do (a) in class on 1/26.

5.7 As part of your answer, explain briefly the final remark about the Schröder-Bernstein Theorem.

5.8 Hint: how many numbers  $x$  in  $B$  can satisfy  $x \geq 1/n$ ,  $n \in \mathbb{N}$ ?

6.9 I am not sure what Abbott means by a “compelling argument.” A proof would be ideal; failing that, be as compelling as you can. The Schröder-Bernstein Theorem might be helpful.