1. Let $(a_n)$ be a bounded (not necessarily convergent) sequence. Prove that it has a subsequence converging to $\limsup a_n$ and a subsequence converging to $\liminf a_n$.

2. Abbott 2.6.1

3. Abbott 2.6.4

4. Abbott 2.6.5(b)

5. Abbott 2.7.2

6. Abbott 2.7.4

7. Abbott 2.7.5

8. Abbott 2.7.8

9. **(Hand this one in to David.)** Abbott 2.7.9