

1. (Hand this one in to David.)

- a) Suppose $A \subseteq \mathbb{R}$ is not closed. Show there is a sequence in A that converges to a point not in A .
- b) Suppose A is an unbounded set. Show there is a sequence in A with no convergent subsequence.

2. 4.2.1 a, c**3.** 4.2.3**4.** 4.2.6**5.** 4.2.7 **(Hand this one in to David.)****6.** 4.2.9**7.** 4.3.2 b**8.** 4.3.4**9.** 4.3.7**10.** 4.3.8