

Assignment 4
(Due February 16)

Reading: (*from Reed*) §2.6

Problems: §2.1: #6

§2.2: #1b, 2a, 4, 5

§2.4: #2 (replace “real numbers” by “ordered Archimedean field”), 7, 9, 13, 14

§2.5: #1, 3, 4

Additional Problems: 1. A real number d is said to be a *limit point* of a sequence $\{a_n\}$ if for any $\epsilon > 0$ and any $N \in \mathbb{N}$, there exists $n \geq N$ such that $|a_n - d| \leq \epsilon$, or in logical form, $(\forall \epsilon > 0)(\forall N \in \mathbb{N})(\exists n)(n \geq N \wedge |a_n - d| \leq \epsilon)$. Write the logical and then the prose form of the statement: “ d is not a limit point of $\{a_n\}$ ”.