Problem Set 4 Due Friday, May 1.

## Real Analysis

## Math 131A, Spring Quarter 2015

- 1. Do problems 9.1 (b), 9.4, 9.9, 9.10, 9.11, 9.15, 10.7, 10.10, 11.1, 11.6, in the textbook.
- 2. Suppose  $(s_n)$ ,  $(t_n)$  are sequences of real numbers such that for each  $\varepsilon > 0$ , there is  $N \in \mathbb{N}$  such that for all n > N we have  $|s_n t_n| < \varepsilon$ . Let  $s \in \mathbb{R}$  such that  $s_n \to s$ . Prove that also  $t_n \to s$ .