

Problem Set 4  
Due Friday, October 25.

*Real Analysis*

Math 131A, Fall Quarter 2013

1. Do problems 9.1 (b), 9.4, 9.9, 9.10, 9.11, 9.15 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  $s_n \rightarrow s$ . Prove that also  $t_n \rightarrow s$ .