

HOMEWORK 4

Due Thursday, September 20th

The exercises are from *Elementary Analysis*, 2nd edition, by Kenneth Ross.

1. Exercise 10.6
2. Exercise 11.10
3. Exercise 12.4
4. Exercise 12.10
5. Let (s_n) be a sequence that is bounded above but not below.
 - (a) Construct a subsequence (s_{n_k}) of (s_n) that diverges to $-\infty$. [Don't just say that (s_{n_k}) exists.]
 - (b) Given that $\limsup s_n$ is finite, construct a subsequence (s_{n_k}) of (s_n) that converges to $\limsup s_n$. [Don't just say that (s_{n_k}) exists.]