

Math 35
Winter 2014
Homework Assigned Friday, January 30

As usual, this homework is due at the beginning of class next Wednesday, February 5.

Problem: Somebody (either an absent-minded professor or a careless typesetter) accidentally wrote, in place of the definition of convergence,

$$(*) (\forall \varepsilon > 0) (\forall N) (\exists n \geq N) (|x_n - L| < \varepsilon).$$

Prove that $(*)$ holds if and only if $\{x_n\}$ has a subsequence converging to L .