Math 140A: "Winter" 2016
Homework 3

Available	Friday, January 15	Due	Friday, January 22

Turn in the homework by 5:00pm on Friday, January 22, in the homework box in the basement of AP&M. Late homework will not be accepted.

1. Exercise 3.1, p. 78 in Rudin.

2. Exercise 3.3, p. 78 in Rudin.

3. Exercise 3.16, p. 81 in Rudin.

4. Suppose $(a_n)_{n=1}^{\infty}$ is a Cauchy sequence, and suppose further that it has a convergent subsequence $(a_{n_k})_{k=1}^{\infty}$, with limit a. Prove that $(a_n)_{n=1}^{\infty}$ is convergent, and $a_n \to a$.