Math 140A: "Winter" 2016 Homework 6

Available | Friday, February 5 | Due | Friday, February 12

Turn in the homework by 5:00pm on Friday, February 12, in the homework box in the basement of AP&M. Late homework will not be accepted.

- 1. Exercise 3.4, p. 78 in Rudin.
- 2. Exercise 3.6, p. 78 in Rudin.
- **3.** Exercise 3.14(a,b,c), p. 80 in Rudin.
- **2.** Let (z_n) be a sequence in \mathbb{C} . Show that (z_n) converges iff the two real sequences $(\operatorname{Re}(z_n))$ and $(\operatorname{Im}(z_n))$ converge, in which case

 $\lim_{n \to \infty} z_n = \lim_{n \to \infty} \operatorname{Re}(z_n) + i \lim_{n \to \infty} \operatorname{Im}(z_n).$