Math 140A: "Winter" 2016 Homework 8 Available | Friday, February 19 || Due | Monday, February 29 ||

Turn in the homework by 5:00pm on Monday, February 29, in the homework box in the basement of AP&M. Late homework will not be accepted.

1. Determine whether the following series converge or diverge, and justify your answers.

(a)
$$\sum_{n=1}^{\infty} (-1)^n \sin\left(\frac{\pi}{n}\right)$$

(b) $\sum_{n=1}^{\infty} (-1)^{n-1} \frac{2n-1}{3n-1}$
(c) $\sum_{n=1}^{\infty} \frac{\cos(n\pi)}{\sqrt{n}}$
(d) $\sum_{n=1}^{\infty} \left(\frac{1}{n+2^{-n}} - \frac{1}{n+1}\right)$

- **2.** Exercise 2.5, p. 43 in Rudin.
- **3.** Exercise 2.8, p. 43 in Rudin.
- 4. Exercise 2.11, p. 44 in Rudin.