Homework 6

1. Show that it is possible to have a sequence $\{f_k\}$ of integrable functions and an integrable f such that

$$\int |f - f_k| \to 0$$

and yet f_k does not converge to f at any point.

2. Royden, Section 4.4, Exercise 35.

3. Royden, Section 4.4, Exercise 36.

4. Royden, Section 5.3, Exercise 16.

5. Royden, Section 5.3, Exercise 17.