520 SPRING 2025 PROBLEM SET #2

- **Problem 1.** Chapter 2 problem 1 in Stein and Shakarchi.
- Problem 2. Chapter 2 problem 2 in Stein and Shakarchi.
- **Problem 3.** Chapter 2 problem 3 in Stein and Shakarchi.
- **Problem 4.** Chapter 2 problem 4 in Stein and Shakarchi.
- **Problem 5.** Chapter 2 problem 10 in Stein and Shakarchi.
- **Problem 6.** Chapter 2 problem 15 in Stein and Shakarchi.