MAT 201B Homework 6
Winter 2020
Professor Qinglan Xia
Due Date: Wednesday, February 19 at 9:00am

1. If A is a bounded linear operator on a Hilbert space, prove that

$$||AA^*|| = ||A^*A|| = ||A||^2 = ||A^*||^2.$$

2. Exercise 8.8 in the textbook "Applied Analysis", page 213.

3. Exercise 8.10 in the textbook "Applied Analysis", page 213.

4. Exercise 8.12 in the textbook "Applied Analysis", page 213.

5. Exercise 8.14 in the textbook "Applied Analysis", page 213.