

**MAT202**  
**Homework 1 (Assigned on January 25, 2019).**

**Problem 1.**

Exercise 9.10.1 from page 159.

**Problem 2.**

Extend the Hellinger-Toeplitz theorem (Thm 9.4.8 on p.138) to pairs of operators satisfying  $(Ax, y) = (x, By)$ .

**Problem 3.**

Exercise 9.10.9 from page 160.

**Problem 4.**

Exercise 9.10.12 from page 160.

**Problem 5.**

Exercise 9.10.14 from page 161.

**Problem 6.**

Exercise 9.10.15 from page 161.

**Problem 7.**

Exercise 9.10.17 from page 161.

**Problem 8.**

Exercise 9.10.19 from page 161.

**Problem 9.**

Exercise 9.10.20 from page 162.

**Problem 10.**

Exercise 9.10.21 from page 162.