This homework set has five (5) problems. Some of them are routine, others require more thought. You are encouraged to work together and to ask questions of me; however, you must write up your solutions independently. On this and all subsequent homework sets please write neatly and use complete sentences. Writing mathematics well is a craft, aim to hone it!

1. Let $F : \mathbb{R} \to \mathbb{R}$ be increasing and right continuous with associated Lebesgue-Stieltjes measure $\mu_F$. Prove or disprove: $\mu_F((a, b)) = \mu_F((a, b])$ for any $-\infty \leq a < b \leq \infty$. Is there a general principle at work here?

2. Folland Exercise 1.25

3. Folland Exercise 1.26

4. Folland Exercise 1.30

5. Folland Exercise 1.31