Due In Class: Wednesday, January 31, 2018

Reading: Read *Some Remarks on Writing Mathematical Proofs* by John M. Lee, available at

http://www.math.washington.edu/~lee/Writing/writing-proofs.pdf

Read Chapter 0 in Folland's *Real Analysis: Modern Techniques and Their Applications*, 2nd ed. (hereafter called *the textbook*).

Read Sections 1.1-1.3 in the textbook.

Turn in the following problems. Exercise a.b.c refers to Exercise c at the end of Section a.b of the textbook. You are welcome (even encouraged) to work on problem sets with other students, but ultimately should write up your final solutions independently.

Problem A: Exercise 1.2.2

Problem B: Exercise 1.2.3

Problem C: Exercise 1.2.4

Problem D: Exercise 1.2.5

Problem E: Exercise 1.3.7

Problem F: Exercise 1.3.9

Problem G: Exercise 1.3.10. Note: The measure μ_E is called the *restriction of μ to E*. It is sometimes denoted as $\mu|_E$ or $\mu \llcorner E$.