

Math 7800-110 Fall 2010 HW #9

Instructor: Erkan Nane

Due Monday November 29, 2010.

Problem 1. Prove Lemma 3.3.3 in the book (Durrett, 4th edition).

Problem 2. Suppose that $F_n \implies F$ and that the characteristic functions are dominated by an integrable function. Show that F has a density that is the limit of the densities of the F_n .

Exercises from the book(4th edition, Durrett's book): #3.3.2, # 3.3.6, #3.3.7, #3.3.10, #3.3.16, # 3.3.17, #3.4.2, #3.4.5, #3.4.6,