

## Math 447 - Fall 2024 - Homework 08

Published: Thursday, October 3, 2024

### Status - Reading Assignments:

Here are the reading assignments to be completed before the first one of this HW.

WMS (Wackerly, et al. Textbook):

Ch.1 - 3 (non optional parts)

MF447 lecture notes:

Ch.1 - 3, ch.4 (non optional parts), ch.5, ch.6 (strong students), ch.7 - 10.2

Other:

Nothing assigned yet

### New reading assignments:

Important: Work through the examples of the reading assignments! This is particularly important for the material starting at MF ch.10 and WMS ch.4!

The dates given are Mon, Tue, Wed, when lectures are held. Instructor's suggestion: space them out Mon-Wed-Fri.

#### Reading assignment 1 - due Monday, October 7:

- a. Carefully read MF ch.10.3 and 10.4. Review ch.10.1 and 10.2 as necessary!
- b. Carefully read WMS ch.4.1 - 4.4.

#### Reading assignment 2 - due Tuesday, October 8:

- a. Carefully read MF ch.10.5 and 10.6 and be sure to work through the examples!
- b. Carefully read WMS ch.4.5 - 4.6.

#### Reading assignment 3 - due Wednesday, October 9:

- a. Skim MF ch.10.7 and carefully read ch. 10.8. The beta distribution is optional, but I will refer to it in examples and remarks.
- b. Carefully read WMS ch.4.5 - 4.6, skim ch.4.7, and carefully read WMS ch.4.8.

**General note on written assignments:** I will not collect those assignments for grading but doing them might be helpful for your quizzes and exams.

**(a)** Write from memory the following and compare with the MF lecture notes:

- ALL definitions and the important theorems of MF ch.10.3. Understand the analogy of those items to the corresponding ones in Ch.9 when integration is replaced by summation, PDFs by PMFs, ...
- Write from memory the PDFs (including where they are zero), expectations, variances, MGFs of the distributions that are covered in this chapter.
- Do the same for the discrete distributions of ch.9. (Of course, PMFs take the roles of PDFs).

**(b)** All WMS exercises below are odd-numbered, so the solutions are in the book.

- WMS ch.3.11 exercises: #3.11.167, 3.11.171, 3.11.177
- WMS ch.4.2 exercises: #4.2.001, 4.2.007, 4.2.011, 4.2.017
- WMS ch.4.3 exercises: #4.3.025, 4.3.031
- WMS ch.4.4 exercises: #4.4.051
- WMS ch.4.5 exercises: #4.5.059, 4.5.071, 4.5.077