Math 447 - Fall 2024 - Homework 11

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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 - 4.10 (non optional parts)

MF447 lecture notes:
> Ch.1 - 3, ch.4 (non optional parts), ch.5, ch.6 (strong students), ch.7 - 11.10

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!

Reading assignment 1 - due Monday, October 28:
- **a.** Carefully read MF ch.12.1 – 12.2. Work the examples!

Reading assignment 2 - due Wednesday, October 30:
- **a.** Carefully read WMS ch.6.1 – 6.4. You already have encountered the theory in MF ch.12.1 – 12.2. Work the examples!

Reading assignment 3 - due Friday, November 1:
- **a.** Carefully read MF ch.12.3. Work the examples!
- **b.** Carefully read WMS ch.4.6. Work the examples!

> **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) This is a more detailed version of the HW 10**(a)** written assignment. Write from memory the following definitions and compare them with the MF lecture notes:

- The multivariate extensions for CDFs, PMFs, PDFs.
- The CDFs, PMFs, PDFs for marginal and conditional distributions
- Independence of random elements and random variables
- The multivariate extensions for expected value and variance
- Covariance, conditional expected value and conditional variance

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

- WMS ch.5.2 exercises: #5.1, 5.3, 5.5, 5.7, 5.11, 5.15
- WMS ch.5.3 exercises: #5.19, 5.21, 5.23, 5.25, 5.33,
- WMS ch.5.4 exercises: #5.45, 5.51, 5.63, 5.71,
- WMS ch.5.6 exercises: #5.75, 5.77, 5.79,