Math 447 - Spring 2024 - Homework 11

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Status - Reading Assignments:

Here are the reading assignments you were asked to complete before the first one of this HW.

WMS (Wackerly, et al. Textbook):   ch.1 - 5.11, 6.1

MF447 lecture notes: Ch.1 - 9.2

Other: Nothing assigned yet

New reading assignments:

> - When studying the WMS book, be sure to pay extra attention to the examples!

Reading assignment 1 - due Friday, March 29:
  a.   Carefully read MF ch.9.3.
  b.   Carefully read WMS ch.6.2.

Reading assignment 1 - due Monday, April 1:
  a.   Carefully read WMS ch.6.3.
  b.   Carefully read WMS ch.6.4.

Reading assignment 2 - due Wednesday, April 3:
  a.   Carefully read MF ch.9.4 – 9.5.
  b.   Carefully read WMS ch.6.4 – 6.5.

Reading assignment 3 - due Friday, April 5:
  a.   Carefully read MF ch.10.1.
  b.   Carefully read WMS ch.6.6 – 6.7.

Written assignments - Not collected for grading:

> - When studying the WMS book, be sure to pay extra attention to the examples!

(a) Write from memory the following definitions and compare them with the MF lecture notes:
- Covariance rules
- independence vs uncorrelatedness in general and for normal rvs
- Conditional expectations and variances for both discrete and continuous rvs
- Conditional expectations and variances in the formulas for $E[Y_1]$ and $Var[Y_1]$ (MF theorems 8.16 and 8.17)
- $U = h(Y)$: how to use F_Y to compute F_U and f_U how to use f_Y to directly compute f_U

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

- WMS ch.5.4 exercises: #5.45, 5.51, 5.63, 5.71,
- WMS ch.5.6 exercises: #5.75, 5.77, 5.79,
- WMS ch.5.7 and ch.5.8 exercises: #5.93, 5.103, 5.113,
- WMS ch.5.9 exercises: #5.119, 5.123, 5.125,
- WMS ch.5.10 exercises: #5.135, 5.137, 5.141,
- WMS ch.6.3 exercises: #6.1, 6.3, 6.9,
- WMS ch.6.4 exercises: #6.23, 6.31, 6.35,