

# Math 447 - Spring 2025 - Homework 06

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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.2.1 - 2.5, ch.2.6 through Example 2.12, ch.2.7 - 2.8

MF447 lecture notes:

ch.1 - ch.5, ch.6 (skim), ch.7

Other:

Nothing assigned yet

## New reading assignments:

Really important for the WMS reading assignments: Work through the examples!

### Reading assignment 1 - due: Monday, February 24:

- a. Carefully read the remainder of WMS ch.2.6. Work through all the examples given there! (Repeated from HW 05)
- b. Carefully read MF ch.8.1. Be able to work with tree diagrams!
- c. Carefully read MF ch.8.2. Understand the definitions! Understand the difference of
  - random samples vs SRS
  - urn models with vs without replacement.

### Reading assignment 2 - due: Wednesday, February 26:

- a. Carefully read the remainder of WMS ch.2: ch.2.9 – 2.12. Work through all the examples given there!

### Reading assignment 3 - due Friday, February 28:

- a. Carefully read MF ch.9.1 – 9.2. You definitely have to memorize the PMFs of Bernoulli and binomial random elements (and those of the other non-optional discrete distributions defined later on in that chapter).

**General note on written assignments:** I will not collect those assignments for grading but doing them might be helpful for your quizzes and exams. Be sure to work the examples!

Written assignments are on the next page.

(a) Work closed book through the examples given in the assigned reading, both in MF and WMF.

(b) MF ch.8.2 is foundational to build a bridge from Math 447 (probability) to Math 448 (statistics). Be sure how SRS corresponds to urn models without replacement and random samples correspond to urn models with replacement!

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

- WMS ch.2.9 exercises: #2.111, 2.113, 2.115, 2.117
- WMS ch.2.10 exercises: #2.125, 2.129, 2.131, 2.135
- WMS ch.3.2 exercises: #3.1, 3.3, 3.7
- WMS ch.3.3 exercises: #3.15, 3.21, 3.25, 3.31, 3.33
- WMS ch.3.4 exercises: #3.37, 3.43, 3.53, 3.59
- WMS ch.3.5 exercises: #3.67, 3.73, 3.75

**Selected answers:**

None, since all answers to (a) can be found in WMS and the lecture notes.