Homework 01

Sections 2.1 - 2.4

STAT 5700 - Probability

Instructions

- Homework problems come from the 7th edition of the text *Mathematical Statistics with Applications* by Wackerly, Mendenhall, and Scheaffer, as well as (potential) additional problems provided by the instructor.
- You are responsible for understanding the concepts covered in all problems listed in a homework assignment, but only even-numbered problems should be turned in.
- Be NEAT and show work to support your answers. Points will be deducted if your answer is not adequately supported or the work cannot be readily followed.
- You are encouraged to work together on homework assignments, but each person must write up and turn in their own work and solutions.
- You will turn in this assignment by scanning your work and uploading a single pdf to Blackboard.

Problems to do (responsible for content, but not collected/graded)

- Section 2.3: 1, 5
- Section 2.4: 11, 13, 15, 17, 19
- Section 2.8: 91

Problems to submit

- Section 2.3: 2, 4, 6, 8
- Section 2.4: 14, 18
- Section 2.8: 86
- Additional Problem #1 (required): Show that

  a) $P(A_1 \cup A_2) \leq P(A_1) + P(A_2)$

  b) $P(A_1 \cap A_2) \geq P(A_1) + P(A_2) - 1$