

Assignment #1 — Due Wednesday, September 9, 2009, by 5:00 P.M.

Turn in homework in lecture, discussion, or your TA's mailbox. Please circle the discussion section you expect to attend to pick up this assignment.

311: Monday 1:20–2:10**312:** Monday 12:05–12:55

- Please see the syllabus for the course policy homework assignments:
 - There are severe penalties for late work.
 - Your work must be clear and well-organized with all problems in order.
 - Grading is on a 0 to 4 point scale. (Think of each assignment as getting an A, B, C, D, or F and a corresponding number of points from 4 down to 0.)
1. Exercise 1.2.1.
 2. Exercise 1.2.4.
 3. Exercise 1.2.9.
 4. Exercise 1.2.10.
 5. Suppose that $S = \{1, 2, 3, 4, 5\}$ with $P(\{s\}) = 1/5$ for $s = 1, 2, \dots, 5$. How many events A are there such that $P(A) = 3/5$?
 6. Events A and B satisfy the following probability statements: $P(A) = 2/3$, $P(B) = 1/4$, $P(A \cup B) = 4/5$. Find $P(A \cap B)$, $P(A \cap B^c)$ and $P(A^c \cap B)$.
 7. Events A and B satisfy the following probability statements: $P(A) = 0.25$ and $P(B) = 0.1$. Find the smallest and largest possible values for $P(A \cup B)$.
 8. Events A and B satisfy the following probability statements: $P(A) = 0.9$ and $P(B) = 0.8$. Find the smallest and largest possible values for $P(A \cap B)$.

Work to do, but not turn in.

- Acquire the textbook.
 - Read Chapter 1.
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