

Mathematical Theory of Probability(640:477:03)  
Fall 2013  
Assignment 1 <sup>1</sup>

- Be sure to read and follow the homework requirements given on the course web page, especially the information about homework format, the samples of acceptable homework solutions, and the policy on collaboration and academic integrity.
- Problems are taken from the NINTH edition of the course text “A first course in probability”.
- Note that problems in the book are classified into three groups “Problems”, “Theoretical exercises” and “Self-test problems and exercises”.
- Problems to be handed in and graded are marked with an asterisk (\*). You should do the other problems, but not hand them in.

The assignment due on Thursday, 9/19 includes the problems carried over from last week, together with some additional problems.

**Homework carried over from last week**

- Assigned “Problems”.
  - Chapter 1: 1,4,5,15\*
  - Chapter 2: 1,4,5,6,7\*,13,14\*, 21\*, 23, 31\*. 42\*
- Assigned “Theoretical exercises”. **Chapter 1:** 2, 3.
  - **Chapter 2:** 5\* ,6

**Additional “Problems” new this week**

- Chapter 1: 7,8b,8c,10c\*,10e\*,18,21,22
- Chapter 2: 18,20\*,25\*,31,37,40

**Some Clarifications on problem statements.**

- Chapter 2, Problem 5, part b. When it says “specify all the outcomes in W” it means list them.
- Chapter 2, Problem 13. In the table, when it says that 10% of the people read newspaper I, this means “10% of the people read newspaper I and possibly other newspapers as well” and does not mean “10% of the people read newspaper I and no other” .
- Chapter 2, Theoretical exercise 5. Here you are asked to give a rule which defines, for each index  $i$ , a set  $F_i$  in terms of the sets  $E_1, E_2, \dots$

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<sup>1</sup>Version: 9/12/13