

HOMEWORK 1
STA320.01, Probability
Fall Semester, 2013

Due: Thurs Sept 12th 2013

- 1** Suppose we pick a number at random from the phone book and look at the last digit. (a) What is the set of outcomes and what the probability should be assigned to each outcome? (b) Would this model be appropriate if we were looking at the first digit?
- 2** Two fair dice are rolled. What is the probability that (a) the two numbers will differ by 1 or less and (b) the maximum number of the two numbers will be 5 or larger?
- 3** If we flip a fair coin five times what is the probability that the number of heads is an even number?
- 4** In a group of 320 high school graduates only 160 went to collage but 100 of 170 men did. How many women did not go to college?
- 5** In the freshman class 62% of the students take math, 49% take science, and 38% take both science and math. What is the percentage takes at least one science and math course?
- 6** Suppose A and B are disjoint events with $P(A) = 0.3$ and $P(B) = 0.5$. What is the probability $P(A^c \cap B^c)$?