ISyE 2027 Homework 1
Due May 20, Friday

1. A man receives presents from his three children, Allison, Betty and Chelsea. To avoid disputes he opens the presents in a random order. What are the possible outcomes?

2. In a group of 320 high school graduates, only 160 went to college but 100 of the 170 men did. How many women did not go to college?

3. (a) How many license plates are possible if the first three places are occupied by letters and the last three by numbers? (b) Assuming all combinations are equally likely, what is the probability the three letters and the three numbers are different?

4. A basketball team has 5 players over six feet tall and 6 who are under six feet. How many ways can they have their picture taken if the 5 taller players stand in a row behind the 6 shorter players who are sitting on a row of chairs?

5. An experiment has only two outcomes. The first has probability p to occur, the second probability p^2. What is p?

6. Let A and B two events. Suppose that $P(A) = 0.4$, $P(B) = 0.5$, and $P(A \bigcap B) = 0.1$. Find the probability that A or B occurs but not both.