STAT 270 Lecture 10
Spring 2015
30 September 2015

- Covered slides 30 to 37.
- Will do 10 minutes more on Chapter 3 on Friday.
- Read Chapter 4 now.
- **Some Relevant Questions in Text**: Chapter 3 numbers 18 to 26, 29, 41 to 43.
- Handwritten slides.
- Key jargon, ideas:
  - To count how many ways something could happen we break the problem down into a sequence of choices.
  - Count the number of possible first choices: get say n_1.
  - Then for each first choice count how many second choices are possible.
  - If the number of second choices is the *same* for every possible first choice, say n_2 then number of ways to make first 2 choices is $n_1 n_2$.
  - I did examples with more choices so multiplying more numbers together.
  - You need to be comfortable with factorials.
  - You need to approach counting in carefully defined steps. Don't be vague about exactly what you are choosing in each step.
  - You need to know that the number of ways to pick k distinguishable items from n is
$$\binom{n}{k} = \frac{n!}{k!(n-k)!}.$$