Remember: Computer Project #1 due Monday.

Reading. Read 2.7 start peeking at Chapter 3.

Practice Problems. Work out the solutions to the following problems in a notebook and check your answers in the back of your text book. YOU WILL NOT TURN THESE PROBLEMS IN for a grade. They are only to help you study. Note however that these problems may appear verbatim on the weekly tests.

None today. Finish the project

Homework to turn in Monday, July 20 AT THE START OF CLASS

Unless otherwise stated, problems are worth 5 points each.

1. **(3 points)** If you roll a die, what are the odds in favor of rolling a 1?

2. **(3 points)** If you draw five cards from a standard 52 card deck, what are the odds against at least one of the cards being a Jack or better (meaning at least one of the cards is a J, Q, K or A)?

3. **(3 points)** If you randomly take ten light bulbs from a pack of 100, of which three are defective, what are the odds against none of the ten chosen light bulbs being defective?

4. Do Exercise 2.48. Part (a) is asking whether the event of being in the placebo group seems close to independent from the events corresponding to the different cholesterol ranges.

5. Justify the formula:

   \[ P(A \cup B \cup C) = P(A) + P(B) + P(C) - P(AB) - P(AC) - P(BC) + P(ABC). \]

6. Do Exercise 2.46 in your book. The answer is in the back, but in your solution explain how to derive this answer from Bayes’s Rule, and include an appropriate tree diagram in your solution.