# 18.440 PROBLEM SET TWO, DUE SEPTEMBER 19

A. FROM TEXTBOOK CHAPTER TWO:

1. Problems: 29, 46, 49, 53,56.

2. Theoretical Exercises: 6,9, 17, 21.

3. Self-Test Problems and Exercises: 14.

B. (Just for fun – not to hand in.) The following is a popular and rather instructive puzzle. A standard deck of 52 cards (26 red and 26 black) is shuffled so that all orderings are equally likely. We then play the following game: I begin turning the cards over one at a time so that you can see them. At some point (before I have turned over all 52 cards) you say "I'm ready!" At this point I turn over the next card and if the card is red, you receive one dollar; otherwise you receive nothing. You would like to design a strategy to maximize the probability that you will receive the dollar. How should you decide when to say "I'm ready"?