

HOMEWORK 4

The following problems are from your textbook. The page number refers to the page in the 4th edition. Please label the questions by page number and question number. For questions that are not from the textbook use the label "Worksheet" and then the question number.

- p252 # 1
- p254 # 14
- p285 # 3
- p304 # 1
- p305 # 4
- p306 # 13
- p327 # 2
- p327 # 4

Being from Boston, it has been a rough start to the baseball season. Let's be optimistic though and suppose the Red Sox' true winning percentage this season is 0.600 (i.e. in each game they have a 60% chance to win). The baseball season is 162 games long.

- (1) What is the chance that they would start the season with 5 straight losses?
- (2) They were predicted to win over 90 games this season. Given that they started with 6 wins and 10 losses, what is the chance they will fulfill this prediction?
- (3) If their true winning percentage is 0.600 what is the chance that they will finish the season with a 0.375 winning percentage?
- (4) Let's suppose that the Yankees true winning percentage is 0.600. What is the chance that the Red Sox will finish ahead of them in the standings, given that the Yankees currently have 10 wins and 6 losses? (You may assume they don't play each other to make things easier).