**STA 131B Homework 1 (Due Wednesday, Jan. 13, 2016)**

Section 3.7 #1, #8

Section 3.9 #6, #18

Section 3.11 #16

Section 4.4 #10

Section 5.7 #8

Section 6.5 #9

Section 7.5 #5, #11, #12, #13

Section 7.6 #6, #14,

**Extra Problems**:

1. Section 7.1 (a) #3, (b) #6.

2. (a) Section 7.5 #2, (b) Section 7.5, #3.

3. Refer to the problem, Section 6.5 #9, but find the exact probability (instead of using the central limit theorem) by first finding the distribution of the total time. You need not find the numerical value of the exact probability, just provide an expression for it.

[Hint: First find the moment generating function of the total time and then its distribution.]