## HW 12

## STAT 346, Spring 2010

I'll make each homework assignment worth 10 points, so that when I count your best 10 of 13 assignment scores, your overall homework score will be out of 100 points possible. For this assignment, three of the five problems to be turned in will be selected for grading. (Two of the graded problems will be worth 3 points apiece, and the other one will be worth 4 points.)

*Note*: On the day these are due, I will collect the HW papers at the beginning of the class period (because I will pass out a solution to a problem very similar to one which is due in order to discuss it during the lecture, and I want you to focus on the lecture and not scurry about to correct a HW problem solution).

1) Consider Problem 2 on p. 425 of the text and obtain the cdf of X for the case of n = 2.

2) Consider part (a) of Exercise 4 on p. 407 of the text. Give the marginal joint pdf of X and Y.

3) Do part (b) of Exercise 4 on p. 407 of the text.

4) Consider the joint pmf in Exercise 3 on p. 407 of the text. Give the marginal pmf of X.

5) Do Exercise 7 on p. 371 of the text.

6) Let  $X_1$  and  $X_2$  be iid exponential random variables having mean 1. Give the expected value of the order statistic  $X_{(2)}$ .

7) Do Exercise 12 on p. 437 of the text.

8) Do Exercise 13 on p. 437 of the text.

Turn in solutions for Problems 3 through 7, but not the others.