Assignment 4 (5 pts):

Within each problem, the subproblems are worth equally.

Read Chapter 9 of the textbook before doing the homework. See the errata at http://www2.stat.duke.edu/~pdh10/FCBS/Misc/errata.txt

1. Problem 9.1 from textbook, pp. 242-243. In (b), change $Pr(Y_j^*=\max\{Y_1^*, \ldots, Y_4^*\}|\mathbf{Y})$ to $Pr(Y_j^*=\max\{Y_1^*, \ldots, Y_4^*\}|\mathbf{Y},\mathbf{X})$. **(1 pt)**

2. Problem 9.2 from textbook, p. 243. Refer to Exercise 6 of Chapter 7, not Example 6. In (b), change $Pr(\beta_j \neq 0|\mathbf{y})$ to $Pr(\beta_j \neq 0|\mathbf{y},\mathbf{X})$. **(1.5 pt)**

3. Problem 9.3 from textbook, pp. 243-244. In (b) (ii), change $E(\boldsymbol{\beta}|\mathbf{y}_{tr})$ to $E(\boldsymbol{\beta}|\mathbf{y}_{tr}, \mathbf{X}_{tr})$. **(1.5 pt)**

4. All the R code for this assignment. **(1 pt)**