

**CAS MA 575 – Linear Models.**

Boston University, Fall 2013

**HOMEWORK 4**

1. Problem 2.3 from your textbook. [The centering of regression variables is an important concept, and one that often simplify calculations.]
2. Problem 2.8 from your textbook, on the scale invariance of various statistics.
3. Read section 3.1 in your textbook on added-variable plots, and solve problem 3.3 in your textbook. [This problem is asking you to think about multiple regression, in certain extreme cases of relationships between  $Y$  and  $X_1$  and  $X_2$ .]
4. Problem 3.4 in your textbook. [More on added variable plots, but this time in the special case where you have orthogonal variables.]