Homework 2
ECON 4818
Professor Martins-Filho
Due date: 2.10.2012 by 1:50 PM

1. From your textbook do questions:

    1. D1, D2, D3, D5 on page 798.

    2. E1 on page 811.

    3. 2.2 on page 61.

2. A regression model is specified as follows,

$$E(Y_i|X_i) = \beta X_i \text{ for } i = 1, \cdots, n$$

with $\{(Y_i, X_i)\}_{i=1,\dots,n}$ an iid sequence and $V(Y_i|X_i) = \theta$ and $Y_i, X_i \in \Re$.

a) Obtain $E(Y_i)$.
b) Consider the estimator $\hat{\beta} = \frac{\bar{Y}}{\bar{X}}$ where $\bar{Y} = \frac{\sum_{i=1}^n Y_i}{n}$ and $\bar{X} = \frac{\sum_{i=1}^n X_i}{n}$. Is $E(\hat{\beta}) = \beta$? What is $V(\hat{\beta})$?