EE 325 Quiz 4 (10 points) Due April 2nd 2013

In order to receive points from the following questions, students must submit your STATA output table. **No photocopy of STATA output table will be accepted. Answers must be hand written by blue pen.**

Use the data in GPA2.DTA

Consider the equation

$$COLGPA_i = \beta_0 + \beta_1 hsize_i^2 + \beta_3 hsperc_i + \beta_4 sat_i + \beta_5 female_i + \beta_6 athlete_i + u_i$$

where

$COLGPA_i$ = cumulative college grade point average

$hsize_i$ = size of high school graduating class, in hundreds

$hsperc_i$ = academic percentile in graduating class

sat_i = combined SAT score

$female_i$ = a binary gender variable (1=female, 0= otherwise)

$athlete_i$ = a binary variable (1= student-athletes, 0 = otherwise)

a. (1 point) What are your expectations for the coefficients in this equation?

b. (3 points) Estimate the equation and report the results in the usual form. What is the estimated GPA differential between athletes and non-athletes? Is it statistically significant?

c. (3 points) Drop sat from the model and reestimate the equation. Now, what is the estimated effect of being an athlete?

d. (3 points) In the equation, allow the effect of being an athlete to differ by gender and test the null hypothesis that there is no ceteris paribus difference between women athletes and women non-athletes.