BIOS 145 Lab #3 9/10/97

- Web page up!

  -- http://www.bios.unc.edu/classes/145/index.html

  -- Please report any problems to me at afaiz@bios.unc.edu

- 1st hour: KKM Ch.7: #5, 6, 7; Ch.13: #2a

- 2nd hour: questions

- Other:

  1. Extra 1 hr. for Thurs/Fri?

  2. Reading in Excel data into SAS

  3. PROC REG/ANOVA

KKM Ch.7 #5:

a. Determine the ANOVA table for the regression of TIME (Y) on INC (X) in Problem 3 of Chapter 5.

-- See SAS printout #1

b. Test the hypothesis H_0: "no significant straight-line regression" using an F-test.

-- See SAS printout #1

c. Compare F above and T^2.

From Chapter 5,

$$T = \frac{\widehat{\beta}_1}{\text{s.e.}(\widehat{\beta}_1)} = \frac{.000714}{.000353} = 2.023$$

so

$$T^2 = (2.023)^2 = 4.093 = F \text{ (from above)}$$

d. Determine r^2 from ANOVA table

$$r^2 = \frac{\text{SSY} - \text{SSE}}{\text{SSY}} = \frac{\text{SSR}}{\text{SSY}} = \frac{450.867}{2433.781} = .185$$

KKM Ch.7 #6:

a. Determine ANOVA table for straight-line regression of DI (Y) on IQ (X) in Problem 4 of Chapter 5 (excluding outlier)

-- See SAS printout #2

b. Determine r^2 using the ANOVA table.

$$r^2 = \frac{\text{SSR}}{\text{SSY}} = \frac{681.157}{1046.183} = .651$$

KKM Ch.13 #2a:

Complete the ANOVA table using the given printout:

Source	df	SS	MS	F
Regression				
Total				