

Homework 26

Due: Wednesday, December 2, at the start of class.

Go to the file we worked on in class called "Regressions" on the G drive.

- 1) Go to the Factory data. Add a column to the data set, and name it "Junk". Now write the digits of your T-number in this column, and start over and repeat your digits until this column is the same length as the others (what you are doing is creating a new variable that we both know can't be related to the factory data). Now regress Energy Use on Temp, Production, and Junk.
  - a) What is your coefficient on junk? \_\_\_\_\_
  - b) What is your standard error on junk? \_\_\_\_\_
  - c) What is your significance F (the first 10 digits)? \_\_\_\_\_
- 2) Keep your regression from # 1. Run a new regression with Temp and Production, but without Junk (you can circle bigger or smaller below).
  - a) Is the R-square of this regression bigger or smaller than that in # 1?
  - b) Is the adjusted R-square of this regression bigger or smaller than that in # 1?
  - c) Is the standard error of this regression bigger or smaller than that in # 1?
  - d) Is the significance F of this regression bigger or smaller than that in # 1?
- 3) Go to the Parks data. Add a column to the data set, and name it "Junk". Now write the digits of your T-number in this column, and start over and repeat your digits until this column is the same length as the others (what you are doing is creating a new variable that we both know can't be related to the parks data). Now regress Operating Expenses on Acreage, Overnight Visitors and Junk.
  - a) What is your coefficient on junk? \_\_\_\_\_
  - b) What is your standard error on junk? \_\_\_\_\_
  - c) What is your significance F (the first 10 digits)? \_\_\_\_\_
- 4) Keep your regression from # 3. Run a new regression with Acreage and Overnight Visitors, but without Junk (you can circle bigger or smaller below).
  - a) Is the R-square of this regression bigger or smaller than that in # 3?
  - b) Is the adjusted R-square of this regression bigger or smaller than that in # 3?
  - c) Is the standard error of this regression bigger or smaller than that in # 3?
  - d) Is the significance F of this regression bigger or smaller than that in # 3?