PENN STATE UNIVERSITY
Department of Economics

Econ 597D Sec 001 Computational Economics — Gallant
Homework 3 — Fall 2015
Due Sep 15, 2015

Available at the course website http://www.aronaldg.org/courses/compecon by clicking on `Source Code` and then `ceh03` is a data set epa.csv and a program epa.cpp that reads epa.csv into the realmats `y` and `X`.

Also in the code, the sort member function is used to print the names and miles per gallon of the five most fuel efficient vehicles and the five least fuel efficient.

Using class realmat, regress `y` on `X` and compute t-statistics for the regression coefficients corresponding to each column of `X`. Delete the insignificant columns of `X`, compute the residuals for the regression of `y` on the columns that remain.

Print out the names and residuals of the five most fuel efficient vehicles and the five least efficient after adjusting for vehicle characteristics. The most fuel efficient have the smallest residuals and the least have the largest residuals. Why?

Turn in a printed copy of your program, makefile, sample output, and an answer to the question above and this question: "Why was the regression run on gallons per mile rather than miles per gallon?"