Homework 5
Due Date: 11:59pm (Eastern time), Friday Nov 20, 2020

**Part I. Questions 7.1, 7.10 is from "Applied Linear Regression" book.
Please see below for descriptions of these two questions.
Data website**: http://users.stat.umn.edu/~sandy/alr4ed/data/

7.1 Sue fits a WLS regression with all weights equal to 2. Joe fits a WLS regression to the same data with all weights equal to 1. What are the differences in estimates of coefficients, standard errors, σ^2, F-tests between Sue's and Joe's analyses?

7.10 (Data file: `fuel2001`)

    7.10.1 Use the bootstrap to estimate confidence intervals for the coefficients in the fuel data, and compare the results with the usual large sample OLS estimates.

    7.10.2 Examine the histograms of the bootstrap replications for each of the coefficients. Are the histograms symmetric or skewed? Do they look like normally distributed data, as they would if the large sample normal theory applied to these data? Do the histograms support or refute the differences between the bootstrap and large sample confidence intervals found in Problem 7.10.1?

Part II. Questions 8, 9 in Chapter 5.4 of "An Introduction to Statistical Learning" book
(http://faculty.marshall.usc.edu/gareth-james/ISL/ISLR%20Seventh%20Printing.pdf).