# HW 4

1. Refer to textbook, Problem 6.18 on p. 251 to obtain the info about the data and variables. Read the data from here: https://users.stat.ufl.edu/~rrandles/sta4210/Rclassnotes/data/textdatasets/KutnerData/Chapter%20%206%20Data%20Sets/CH06PR18.txt

   a) Obtain the appropriate ANOVA table and calculate SSR($X_4$), SSR($X_1|X_4$), SSR($X_2|X_1,X_4$), SSR($X_3|X_1, X_2, X_4$).

   b) Test whether X2 and X3 can be dropped from the model given that X1 and X4 are retained. Use $\alpha = 0.01$, state the hypotheses, critical value, p-value and conclusion.

   c) Calculate $R^2_{Y,X_4}, R^2_{Y,X_1}, R^2_{Y,X_1|X_4}, R^2_{X_1,X_4}, R^2_{Y,X_2|X_1,X_4}, R^2_{Y,X_3|X_1,X_2,X_4}$ and the regular $R^2$ when predicting $Y$ with all $X$ variables.