Homework 1   Due: 9/18

1. Exercise 2.18 in POE5.

Additional questions. You can use the entire sample as in part b of 1.

2. Save the predictions and estimated residuals. Compute squared correlation between y and $\hat{y}$. Compare to the reported R-square from the regression.
3. Compute summary statistics for the estimated residuals. Is the mean equal to zero? Is this expected? Explain.
4. Compute the correlation between the regressors (1 and x) and the estimated residual. Explain the result.
5. Find the sample mean of y and $\hat{y}$. Are they always the same? Explain.
6. Does the estimated regression line pass through $\bar{x}$ and $\bar{y}$?
7. Plot y vs x along with the estimated regression line. Mark $\bar{x}$ and $\bar{y}$ on the plot.