Economics 311 Fall 2017
Daily Problem #16 October 30

This daily problem is effectively a review of the four class sessions since fall break (including today). Your answers may be longer than usual, but remember that they serve a dual purpose: answering the daily problem *and* preparing you for the upcoming midterm.

We have discussed three "pathologies" of regression analysis in the last week. This problem asks you to summarize three aspects of each pathology:

a. How does the problem affect the properties of OLS estimators and their standard errors (biased/unbiased, best or not best)?
b. How do we detect the presence of this problem?
c. If we find that it is a problem, what alternative strategy or estimator would improve our estimates?

Answer each of these questions for:

1. Multicollinearity

2. Serial correlation in time-series data

3. Heteroskedasticity