Economics 312 Spring 2014
Daily Problem #20 March 10

At the beginning of the course, we discussed how OLS estimators can be derived using the method of moments. This material anticipated the material in Section 10.3.1 of the text. We now return to this analysis to examine that case of endogenous regressors.

1. Explain how equations (10.15) relate to equations (10.13) and (10.14).

2. What properties of (a) the mean (or sum) of the residuals and (b) the sample correlation (or covariance) between the residuals and the regressor(s) are implied by (10.15)?

3. Explain why the OLS estimators based on (10.15) are inappropriate if assumption (10.14) fails to hold.

4. Explain why each of the three conditions for a good instrument listed at the beginning of Section 10.3.3 is needed in the subsequent derivation of the IV estimator.