ECON 5350 Problem Set #8

Due: Tuesday, November 17

1. Greene 5th edition, Exercise 9.1.
2. Simulate data ($n = 100$) for y and x in Exercise 9.1 for the parameter values $\alpha = 2$ and $\beta = 3$. Then use the simulated data, Gauss-Newton algorithm, and NLS (with the Newton-Raphson algorithm) to estimate α and β. Provide standard errors and asymptotic tests of significance for the coefficients.
3. Prove that Newton's method for minimizing the sum of squared residuals in the linear regression model will converge to the minimum in one iteration.