Homework 8. Due Wednesday May 5.

1. You want to estimate the model

$$y_i = \alpha_0 + \alpha_1 x_i + e_i$$

by maximum likelihood. Assume that the variance of the error term is $var(e_i) = \gamma x_i^2$. Derive the maximum likelihood estimators for α_1 and γ.

2. Continue the computer problem from Homeworks 6 and 7.

This time, test for heteroskedasticity by regressing the squared residuals on the regressors and check (using the t-stats) if any are significant. Also test for correlated errors by regressing the period-t residual on the period-$t - 1$ residual and testing if the coefficient is significant.