TS Module 13: Parameter estimation least squares HW

(The attached PDF file has better formatting.)

*Homework assignment: Estimating parameters by regression*

An AR(1) process has the following values:

0.44   1.05   0.62   0.72   1.08   1.24   1.42   1.35   1.50

A.  Estimate the parameter $\phi$ by regression analysis.
B.  What are 95% confidence intervals for the value of $\phi$?
C.  You initially believed that $\phi$ is 50%. Should you reject this assumption?

The time series course does not teach regression analysis. You are assumed to know how to run a regression analysis, and you must run regressions for the student project.

Use the Excel REGRESSION add-in. The 95% confidence interval is the estimated $\beta$ ± the *t*-value × the standard error of $\beta$. The *t*-value depends on the number of observations. Excel has a built-in function giving the *t*-value for a sample of N observations.