LAB #2

- Do experiment 5.6 "Rates of Convergence", Page 48, preferably using the Mathematica notebook with the same title. (Alternatively, you may Use the Function Iterator available at the Dynamical Systems and Technology Project web site). Use the default distance of .001, not .00001 as stated in the book. If you need more than 10,000 iterations to get "convergence" then stop.
- Perform only the "Procedure" and "Results" part of the experiment, not the portion called "Notes and questions". Please do not hand in lists of orbits; turn in only the answers requested in the "Procedure" and the one page essay described in "Results."
- Also answer the following question in your essay: What is the relationship between the speed of convergence to **neutral** fixed points whose first derivative is equal to 1 (not -1) and the higher order derivatives (second and third) at the fixed point?

  Please be sure to review the Lab Report Expectations.

- The Dynamical Systems and Technology Project web site is the work of Professor Bob Devaney at Boston University, and the Mathematica notebooks were written by Sebastian Marotta.