1. (10 points) **Problem 3.12**. Just obtain Fig 3.9.

2. (10 points) **Problem 3.13**. Obtain Lyapunove exponent λ by averaging your results.

3. (10 points) Use the function **Fourier**[] to reproduce Figs. 3.26 - 27.

4. (10 points) Obtain the bifurcation diagram (Fig. 4.23 in S. T. Thornton and J. B. Marion 5th Ed.) of the logistic map and determine the parameter δ_n given by equation 3.21 for different values of n. Compare the convergence of this parameter to the Feigenbaum constant $\delta = 4.669$.