MATH333: Tutorial 7 (24-3-00)

1 Bifucation Diagram for Logistic Map

Logistic Map is written as

$$x_{n+1} = \mu x_n(1 - x_n)$$

for a constant μ in the range of (0,4).

1.1 Basic Properties of the Map

1.2 Period Doubling

1.3 Techniques for doing the Bifurcation Diagram

2 Exercise

Note that because you should have started to do your project now, this exercise is a bonus question to you only. By finishing this, one grade of your previous ecercises will be increased by one sub-grade.

1. (Bonus) Obtain the bifurcation diagram of the Logistic Map

$$x_{n+1} = \mu x_n(1 - x_n)$$

for $0 < \mu < 4$.