

# Chapter 7: Graphical Explorations of the Logistic Equation

Worksheet to accompany

David Feldman, *Chaos and Fractals: An Elementary Introduction*,  
Oxford University Press, 2012

On the four figures are shown plots of the logistic equation for four different values of the parameter  $r$ . For each plot, use graphical iteration to determine the stability of each fixed point. Sketch a representative time series plot.

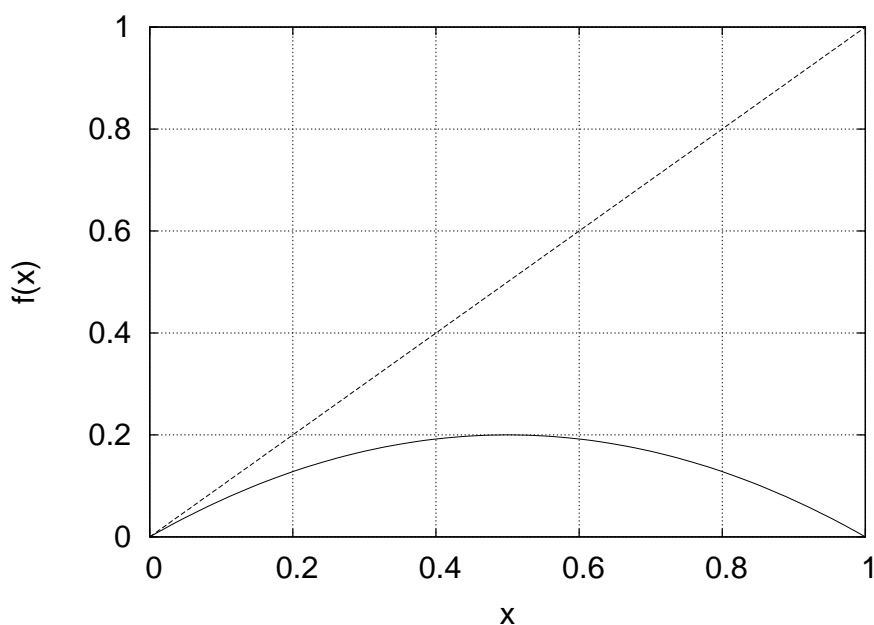


Figure 1: The logistic equation with  $r = 0.8$ .

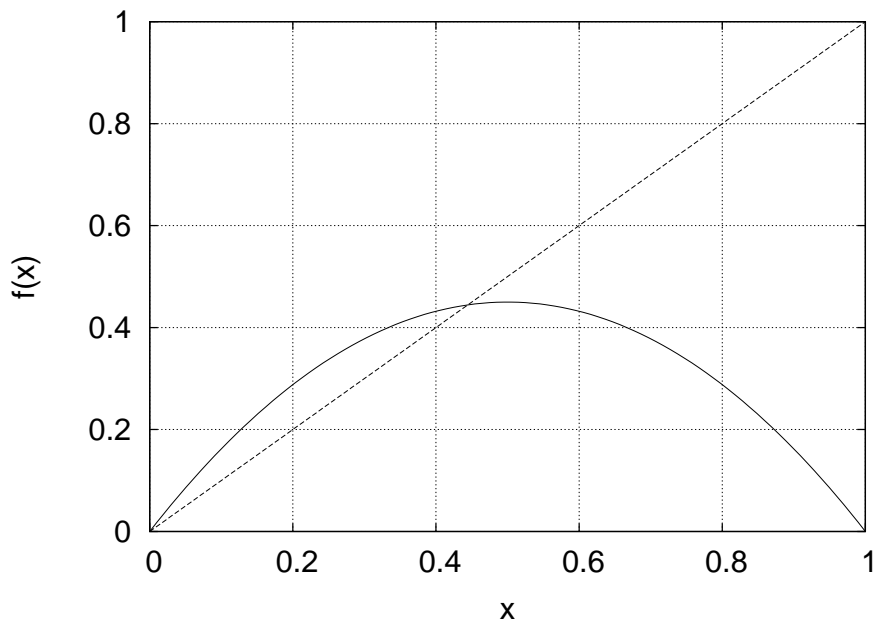


Figure 2: The logistic equation with  $r = 1.8$ .

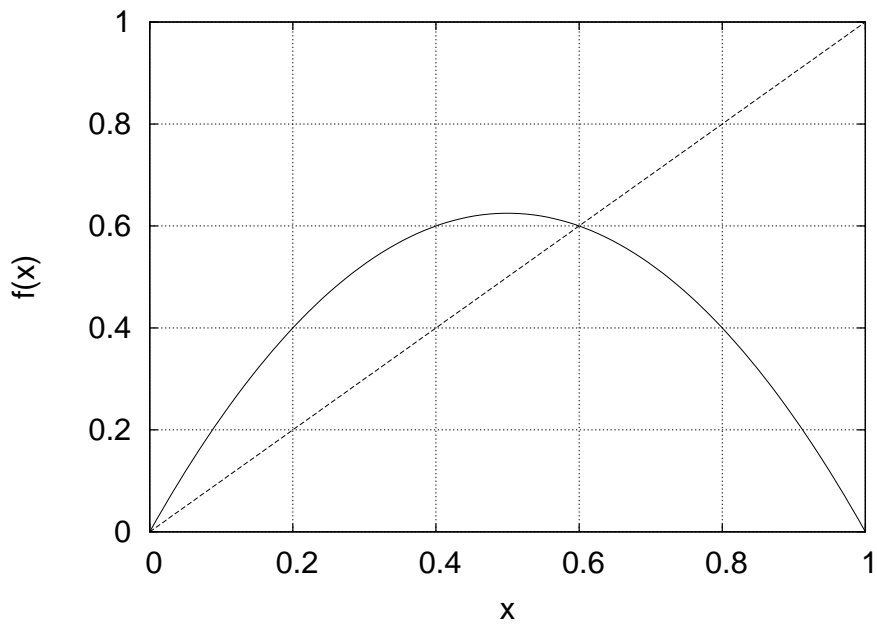


Figure 3: The logistic equation with  $r = 2.5$ .

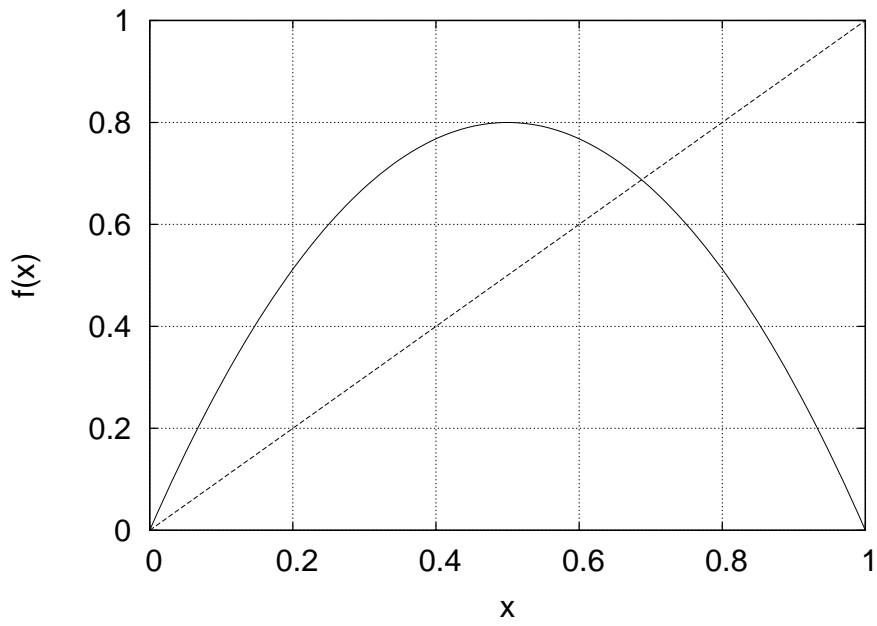


Figure 4: The logistic equation with  $r = 3.2$ .