

# Abstract

Bifurcation appears in models in different fields such as biology, economics, ...etc. In this thesis we study the bifurcation in discrete-time dynamical system in one and two dimensions, we consider the sufficient conditions for the existence of the different types of bifurcation. We study bifurcation in logistic competition and predator-prey models. Also we draw bifurcation diagrams using Matlab 7.12.