

> read "C:/Users/mk1115/Documents/DMB.txt"

First Written: Nov. 2021

This is DMB.txt, A Maple package to explore Dynamical models in Biology (both discrete and continuous)

accompanying the class Dynamical Models in Biology, Rutgers University. Taught by Dr. Z. (Doron Zeilbeger)

*The most current version is available on WWW at:
<http://sites.math.rutgers.edu/~zeilberg/tokhniot/DMB.txt> .
Please report all bugs to: DoronZeil at gmail dot com .*

*For general help, and a list of the MAIN functions,
type "Help()". For specific help type "Help(procedure_name);"*

*For a list of the supporting functions type: Help1();
For help with any of them type: Help(ProcedureName);*

*For a list of the functions that give examples of Discrete-time dynamical systems (some famous),
type: HelpDDM());*

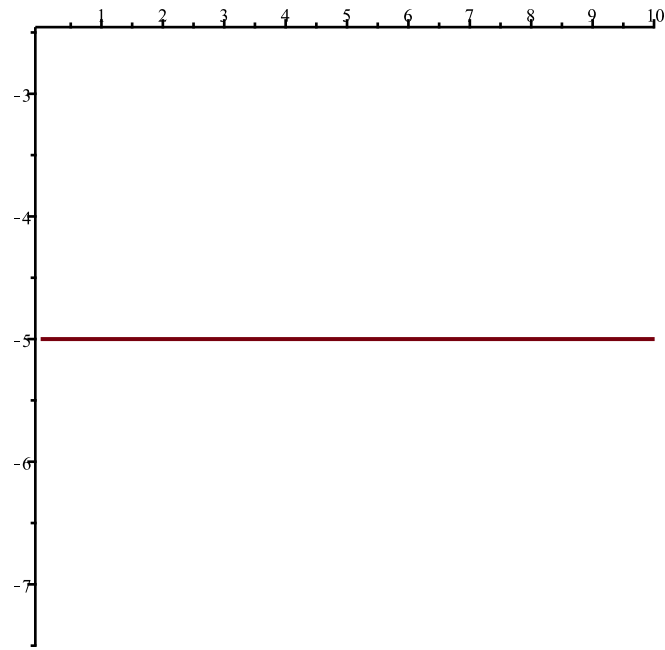
For help with any of them type: Help(ProcedureName);

*For a list of the functions continuous-time dynamical systems (some famous) type: HelpCDM());
For help with any of them type: Help(ProcedureName);*

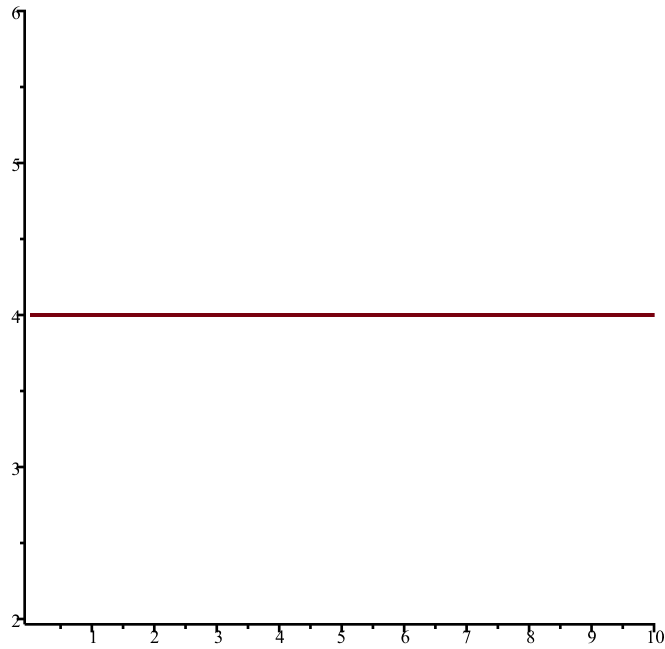
(1)

> #P17

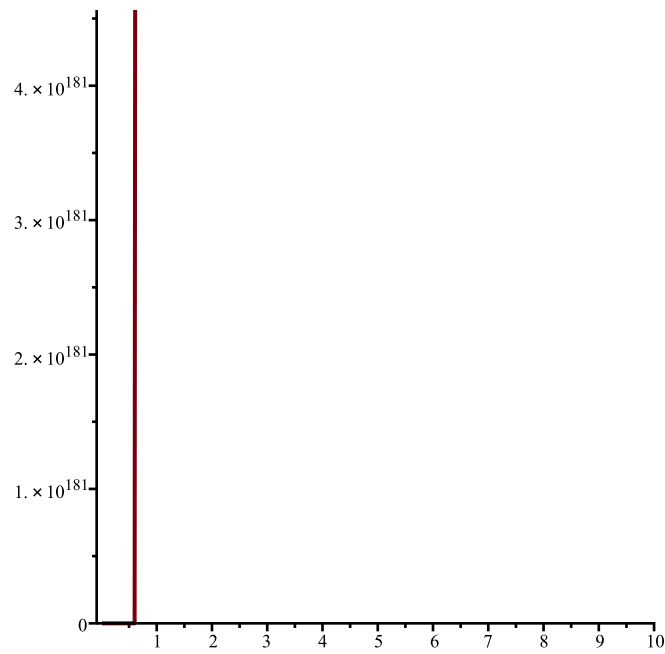
> TimeSeries([(1-2*x-3*y) * (2-2*x-3*y), (3-x-2*y) * (1-x-2*y)], [x, y], [-5, 4],
0.01, 10, 1);



> *TimeSeries*([(1-2*x-3*y)*(2-2*x-3*y), (3-x-2*y)*(1-x-2*y)], [x, y], [-5, 4], 0.01, 10, 2);

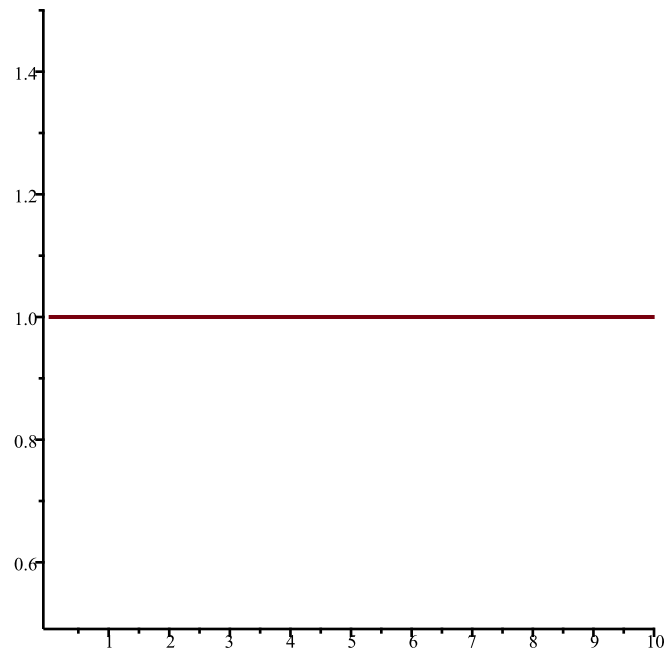


> *TimeSeries*([(1-2*x-3*y)*(2-2*x-3*y), (3-x-2*y)*(1-x-2*y)], [x, y], [-5.1, 4.1], 0.01, 10, 1);

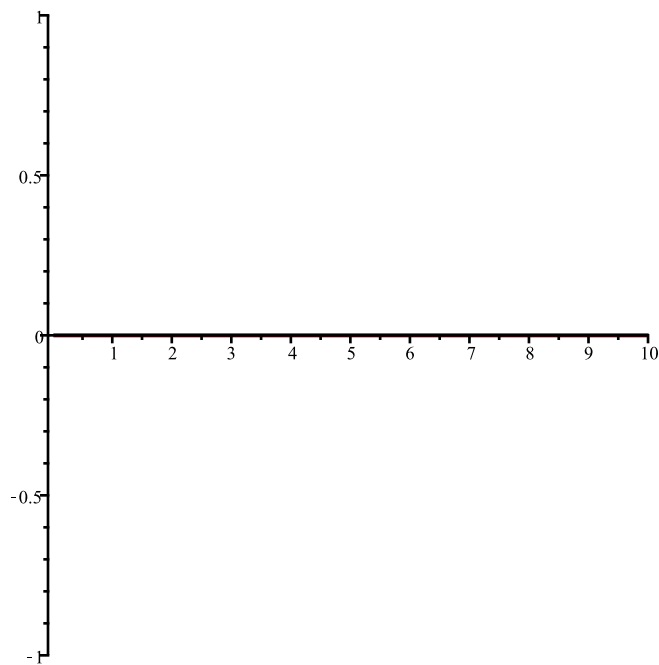


> #[-5, 4] is an unstable fixed point.

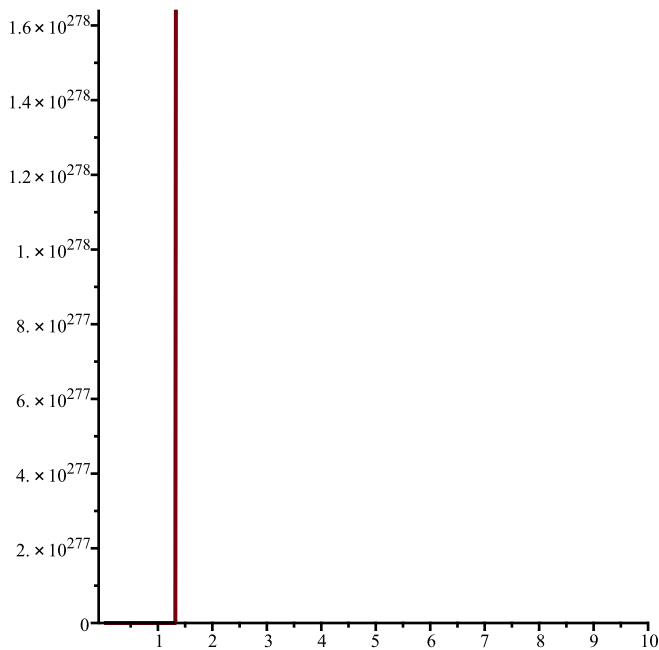
> TimeSeries([(1-2*x-3*y)*(2-2*x-3*y), (3-x-2*y)*(1-x-2*y)], [x, y], [1, 0], 0.01, 10, 1);



> TimeSeries([(1-2*x-3*y)*(2-2*x-3*y), (3-x-2*y)*(1-x-2*y)], [x, y], [1, 0], 0.01, 10, 2);



> *TimeSeries*([(1-2*x-3*y)*(2-2*x-3*y), (3-x-2*y)*(1-x-2*y)], [x,y], [1.1, 0.1], 0.01, 10, 1);



> *#[1, 0] is an unstable fixed point.*