

How to solve a differential equation, when dsolve doesn't work.

Predator-prey model,

How to find the fixed point

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> # Now, find an approximate solution instead
restart:
read("d:/475/RungeKutta.mpl"):

> # To apply the program, prepare input
f := Vector(2): # the RHS functions
f[1] := (t,x,y) -> x - 0.1*x*y:
f[2] := (t,x,y) -> 0.02*x*y-0.5*y:

> # To calculate the fixed points
solve( {x-0.1*x*y=0,0.02*x*y-0.5*y=0},{x,y});
      {x=0., y=0.}, {x=25., y=10.}

>
```

(1)