Math 3B: Lecture 20

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- Slope field for general DE's

Last time

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- How to draw slope fields

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- How to draw slope fields
- Nullclines

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- How to draw slope fields
- Nullclines
- Drawing solutions

Deafinition

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i.e. where the right hand side does not depend on t, is called autonomous

Autonomous equations

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- Suppose $f(a) = 0$.

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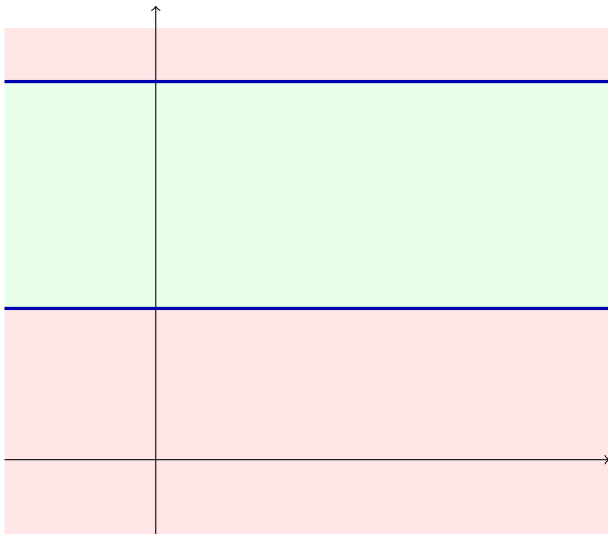
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We want points (t, y) such that $f(y) = 0$.

- Suppose $f(a) = 0$.
- Then (t, a) is on the nullcline, for any t.
- So the line $y = a$ is part of the nullcline, whenever $f(a) = 0$.

Thus our slope field and nullclines look something like

Example of harvesting populations

On the board. . .