Lab 5

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Who am i

- I am Fedotov Dmitriy.
- Third year student of the Rudn University.

Why do lab 5?

- The Lotka-Volterra mathematical model, also known as the "predator-prey" model, has a wide range of applications, which allows it to describe many processes in the field of biology, ecology, economics, sociology, medicine, and so on.
- This model can be used to describe a model of military action, a viral model of an infectious disease, a model of the spread of epidemics.
- The predator-prey model describes competition processes well enough.

Purpose of laboratory work

Study Lotka–Volterra equations

Task

1. Plot a graph of the dependence of the number of predators on the number of prey, as well as graphs of changes in the number of predators and the number of prey under the initial conditions.
2. Find the stationary state of the system.

Results

I learnd:

1. Build a graph of the dependence of the number of predators on the number of prey and graphs of changes in the number of predators and the number of prey under initial conditions.
2. Look for a stationary state of the system.

Conclusion

I learned Lotka–Volterra equations.

Thank you for attention .