

# Lab 3

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# Who is this guy

- My name is Yakushevich Artyom Yurievich
- I am a 3rd year student of the RUDN University, specializing in Mathematics and Computer Science.

## Why do Lab 3?

- This model is practically used in military science when describing the decline of the fighting sides over time.
- War casualties are determined through Lanchester models.
- This is one of the most developed methods for predicting likely victims in potential armed conflicts.
- Lanchester models describe the interaction of ethnic groups living in the same territory.
- They even describe models of competitive interaction between two firms

# The purpose of the laboratory work

- Consider the Lanchester model of combat.

- Plotting a graph of changes in the number of troops of Army X and Army Y for a model of combat operations between regular troops.
- Plotting a timetable for changing the number of troops in Army X and Army Y for a model of warfare with the participation of regular troops and partisan detachments.

## Results of the laboratory work

As a result of the third laboratory work, I examined the Lanchester combat model and learned

- Calculate the possibilities of approaches of reinforcements to the armies;
- Make up a system of differential equations for changing the size of armies;
- Build graphs for combat models.

# Findings

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As a result of the third laboratory work, I looked at one of the examples of the Lanchester combat model.



**Thanks for attention!**