

Graduate work: 79 pp., 18 img., 6 tab., 2 applications, 6 sources.

We study for solving the optimization problem, namely, the problem of finding the shortest interval between the parties arbitrary angle that passes through a given point inside of it. Provides theoretical information on classification medotiv and optimization problems. Built three mathematical models for the task. A software implementation process for minimizing functions which has been found.

Object of study: The problem of finding the shortest path between the sides of the angle, which passes through a given point inside it.

Subject of study: Mathematical modeling and optimization, which are used in problems of this type.

Objective: The work is devoted fo building mathematical models of the problem, finding a solution set of optimization problems, the analysis of the results.

Methods and apparatus: To achieve the goals used mathematical analysis, linear algebra and optimization techniques. The software was written in the Python programming language among PyCharm.

Results and novelty: The study was developed three mathematical models of different parties in different ways reflect the actual problem statement.

USES: Decision-making systems or other systems that need solving optimization problems.

OPTIMIZATION METHODS, GRADIENT METHODS, ANGLE AND POINT IN THE MIDDLE OF HIM, PYTHON 3.4.0, SINGLE-OBJECTIVE OPTIMIZATION