**Task №3**

1. Develop yourself using numpy library:

a) python function for implementation of gradient descent (GD) with momentum algorithm for the function of two variables f(x,y).

b) python function for implementation of ADAM optimization algorithm for the function of two variables f(x,y).

2. Come up with a function of two variables of an arbitrary form and implement the search for its minimum using those implemented in p.1 functions - a) and b).

3. Illustrate the process of finding an extremum in the form of a graph of the dependence of the value of the difference between two successive approximations of the solution (x\_next – x\_prev) on the iteration number N or in the form of 2D-plane graph.

4. Write a conclusions about the accuracy of the implemented algorithms.