

ABSTRACT

for coursework, student Tkachova Tetiana, group XA-51
on discipline "Numerical methods"
on the topic of "*Approximation of a tabular function by polynomial of n -th degree
using the least squares method*"

In the coursework were analyzed the task, define the means needed for its implementation, studied the method of least squares, the approximation of a tabular function by polynomial of n -th degree for using the least squares method on the examples of polynomials of 1st, 2nd and 3rd degree.

To solve this problem has been developed a program in Microsoft Visual Studio 2013 (C++, Win32 Console Application). The program was tested on several test examples. The results are analyzed and conclusions.

In the second part of the coursework solved typical problems of approximation of function: defined the type is empirical dependence, calculated are coefficients, received approximating polynomial, and also solved the problem of the spline interpolation. Analysis of the results showed that all functions describe the experimental data.