**Belarussian state university**

**The Mechanics and mathematics faculty**

**Department of nonlinear analysis and analytical economics**

**Annotation for the graduate work**

 **«Some properties of generalized operators»**

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The graduate work consists of

– 31 pages,

– 12 used sources,

Keywords: GENERALIZED COMPLEX NUMBER, GENERALIZED OPERATOR, SPECTRUM OF THE OPERATOR, GENERALIZED SPECTRUM OF THE OPERATOR, RESOLVENT SET.

In this graduate work generalized operators and their properties are investigated.

The aim of the graduate work is to establish a connection between the properties of generalized operators and the properties of linear continuous operators.

To achieve this goal, the methods of functional analysis were used.

The following results were obtained:

1) Theoretical information on the basic properties of linear continuous operators is given.

2) A method for constructing the algebra of generalized operators is described.

3) The results are proved that the algebra constructed has the basic properties of linear continuous operators.

The results of the graduate work can be used to solve problems in mathematics and physics, which are described with the help of unlimited operators.

All results of the thesis are rigorously proved according to the rules of mathematics. Validity and reliability of the results is due to the strict mathematical proofs formulated in the theorems and consistency with the results previously known for certain particular cases.

The graduate work was performed by the author independently.