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THE NEED TO DEVELOP METHODS OF USING ANCIENT PROBLEMS IN THE TEACHING OF MATHEMATICS

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Abstract: In this article, the influence of the development of methods of using ancient problems in the teaching of mathematics on mathematics education is based on the data obtained from scientific sources.

Key words: mathematics, ancient problems, pedagogy, psychology, hypothesis, theory.

Mathematical education helps to form the general culture of a person. Studying mathematics forms a certain way of thinking, logic, develops imagination.

One of the main goals of teaching mathematics is to develop the ability to think. Teaching mathematics has great opportunities for this, because the specific characteristics of the subject of study are the foundations of mathematics.

Tasks play an important role in organizing the educational process. In the teaching of mathematics, they are both the goal and the means of teaching students. Creative and practical aspects of thinking develop in the process of solving problems. At the same time, it is necessary to use the methods collected in psychology and pedagogy for the development of human behavior in the organization of the educational process.

In the 20th century, two famous theories of development - LSVigoodsky and J. Piaget were introduced. Both of them said that human development is, first of all, the development of his psyche (including the development of thinking), and of course it is not limited to this. These scientists, as well as PP Blonsky, D, Bruner, AV Brushshnsky, VA Krutetsky, AN Leontiev, AR Lurnya, BM Teplov, are good. Tikhomirov, SL. Rubinstein, Ya.A. Ponomarev and others made a great contribution to the study of psychological patterns of thinking. Research by psychologists has revealed the importance of training aimed at children's mental development. A number of theories showing different ways of implementing developmental education in psychology and pedagogy, thinking proposed by P.Ya.GsheperinT1, VV.Davydov,

The need for action appears, first of all, when a new goal, new conditions and childhood conditions appear before a person, and when the old means and methods of activity are not enough to achieve the goals, that is, when a person finds himself in a problematic situation. The thinking process begins with the analysis of this problematic situation, but we can talk about the concern of this topic, if it is not only a display, but also a print, that is, related to the need-motivation field. from personality. Since the task is especially clearly manifested as a process in the decision-making process, it is close to the internal thought process that leads to the result (decision).

Today, the needs of science, practice and education determine the relevance of the problem of developing mathematical thinking in students. By mathematical thinking, first of all, we understand the form of thinking that is manifested in the process of knowing a certain science - mathematics or its application. will come.

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The purpose of our research is to determine the place and role of ancient problems in the process of teaching mathematics and to develop a methodology for teaching solving ancient problems on this basis. Systematic and purposeful use of ancient problems in the classroom increases interest in mathematics, encourages students to show independence, initiative and ingenuity, and provides a natural reason for teachers to conduct brief historical excursions about the creators of the problem. who were the greatest mathematicians of their time and about the mathematical sciences of the distant past, the object of study is the process of teaching mathematics in school.

To achieve the goal and test the hypothesis, the following tasks were defined:

- analysis of psychological-pedagogical, scientific-methodical literature on the development of thinking in the process of teaching mathematics;.
- in order to include these issues in the general education system, to determine the specificity and impact levels of ancient issues on the development of students' mathematical thinking;
- creating a system of ancient problems that help to select educational material and develop general educational skills and special skills in solving mathematical problems;
- conducting a pedagogical experiment, including psychological and pedagogical evidence of the feasibility of using the developed methodology for working with these tasks, and summarizing its results.

Expected scientific news of the study:

The methodology of using ancient problems in teaching mathematics is developed, which includes:

• targeted, meaningful, teaching methods and technology, control of students' knowledge; assessment of student development; The requirements for the construction of the ancient task system were determined:

availability of didactic concepts, availability of information and villages and conditions of perception, taking into account the age characteristics of students;

Specific features of ancient issues were identified:

- the use of ancient issues helps to develop cognitive interest as a stable personality trait;
- ancient problems are also important as a means of educating children and affect the formation of their worldview, expand the worldview of students, contribute to the formation and further development of mathematical thinking;
- the use of ancient problems helps to create a creative atmosphere in the classroom and the maximum activity and independence of students;
- The levels of influence of ancient problems on the development of students' mathematical thinking were determined: basic knowledge, systematic, integrative.

The theoretical importance of the work:

- developed on the basis of an activity-based approach to teaching: goals, principles, content, methods, methods, study guides for solving ancient problems; student development assessment system; knowledge control; originality and degree of impact of ancient problems on the development of mathematical thinking used in the process of teaching mathematics;
- the requirements for building a system of problems in ancient issues were determined;
- A plan and scheme for solving an ancient problem is proposed based on generally accepted methods of solving common problems.

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- The characteristic difference of the proposed plan and scheme from the traditional one is that it is an ancient task. as a rule, it does not have a standard form, so it requires "translation" into a modern language that is understandable to everyone;
- The methods of applying old problems have been developed (the use of tasks that reflect the interests of the student not only in the main direction of learning; presenting tasks in various forms; assigning tasks to new tasks. in the name of a literary character; using didactic games).

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