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THE VALUE OF TEACHING THE COMBINATORY DEPARTMENT IN SCHOOL

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Abstract
Mathematics has long been used to solve various life problems in the history of mankind. Simple calculations and measurements related to practical human needs have been performed. Mathematical problems, such as choosing objects and placing them in a certain order, have always been considered areas of human interest.
Combinatorics is one of the main branches of mathematics, and it is important because of its relevance.

Keywords: mathematics, combinatorics, associations.

Mathematics is a tool that humanity uses to understand and subjugate the world around it. In order for a person to have results in important situations in his life, he needs to love mathematics and treat this important science with respect, like many great mathematicians.
Educating the young generation worthy of our great scholars such as Muhammad al-Khorazmi, Ahmad al-Farghani, Abu Raykhan Beruni and Mirza Ulugbek, who made a great contribution to the creation of the foundations of the science of mathematics, conveying modern knowledge to students and making the youth of our country enjoy the beauty of mathematics. creating conditions for them to be is considered both a debt and a duty for everyone. Mathematics is the basis of knowledge of the universe, and it is important in revealing the specific laws of the surrounding events and phenomena, as well as in the development of production, science and technology, and technologies. It is known that the science of mathematics sharpens the human mind, develops attention, educates determination and will to achieve the intended goal, teaches discipline in an algorithmic way, and most importantly, encourages reflection and expands thinking.
As the Honorable President Sh.M. Mirziyoyev noted, "Mathematics is the basis of all sciences. A child who knows this subject well will grow up to be smart, broad-minded, and work successfully in any field." In our country, mathematics has been identified as one of the priority directions of the development of science in 2020, and a number of systematic works aimed at bringing the development of mathematics science and education to a new qualitative level are being carried out. In particular, "Concept of development of public education system of the Republic of Uzbekistan until 2030" adopted on the basis of Decree No. PF-5712 of the President of the Republic of Uzbekistan dated April 29, 2019, "Mathematics education and Decision No. PQ-4387, dated May 7, 2020, "On measures to fundamentally improve the activities of the Institute of Mathematics named after V. I. Romanovsky of the Academy of Sciences of the Republic of Uzbekistan on state support for the further development of the

sciences" Resolution No. PQ-4708 "On measures to improve the quality of education in the field of mathematics and to develop scientific research", in the Address to the Oliy Majlis dated January 24, 2020, comprehensive improvement and development of mathematics science and education a number of important tasks have been defined.

Mathematics has long been used to solve various life problems in the history of mankind. Simple calculations and measurements related to practical human needs have been performed. Solving mathematical problems such as selecting objects and placing them in a certain order through the combinatorics department of mathematics was considered the most correct decision.

Combinatorics is one of the main branches of mathematics, and it is important because of its relevance. Currently, combinatorics information is used in various fields of human activity. In particular, specialists who perform various calculations and work with them in computing techniques, probability theory, mathematical logic, number theory, chemistry, physics, biology, linguistics, information technology, cybernetics and other fields face various problems of combinatorics and during their implementation, they are used for a wide range of purposes.

A special branch of mathematics studying combinatorial problems is called combinatorics.

What is studied in combinatorics? When calculating the number of all possible options for problems of a combinatorial nature, "how many?" or "in how many different ways?" are required to answer such questions.

In practice, the application of this section is very wide. Combinatorics problems can be encountered in various fields during the practical activity of a person.

Here are some of these areas:

• In educational institutions (making schedules);
• In public catering establishments (making a menu);
• Linguistics (making combinations of letter combinations);
• Geography (painting maps);
• In sports competitions (counting the number of matches between participants);
• In production enterprises (distribution of types of work among workers).
• In agricultural fields (distribution of crops on several fields);
• In risk games (calculation of the frequency of wins);
• In biology (decoding, solving DNA codes), etc.

It can also be noted that combinatorics answers questions about how many different structures can be found from given objects based on one or another condition. Combinatorics clarifies how many structures can be formed from a given finite set under certain conditions. The main feature of combinatorial problems is the presence of the question "how many ways (possibility)..." in the structure of the problem. In this section of mathematics, problems related to the topic of the set and various structures made up of the elements of the set are worked out. Combination is the basic concept of combinatorics. With the help of this concept, structures consisting of a certain number of elements of an arbitrary finite set are represented. Combinatorics studies the basic forms of such structures called permutations, permutations, and groupings.

A mathematical model of the studied phenomena is created using combinatorics. As you know, finding the probability of an event is represented by mathematical formulas. This is a mathematical model of a studied process (phenomenon). When studying the probability of an event, it is first necessary to introduce the concept of combinatorics. When studying probability theory and mathematical statistics, combinatorics issues are one of the main motives that interest students in these subjects. The elements of combinatorics were previously taught in the school mathematics course (where the elements of combinatorics were directed to interest the student). However, the elements of combinatorics were not considered as a basis for the subjects of mathematical applications, probability theory and mathematical statistics in the educational programs and were excluded from the school curricula. Therefore, the elements of combinatorics were not taught at school.

However, the new state educational standard adopted on April 6, 2017 caused changes in school curricula. As a result, the combinatorics section of the school curriculum found its expression in some classroom textbooks. The role of combinatorics problems is constantly growing not only in high school textbooks, but also in primary education mathematics. It can be noted that as a result of learning combinatorics problems, students are prepared to solve daily life problems, and it gives them great opportunities to develop their thinking skills. The proof of this is that everyone should learn the basics of combinatorics. The teacher will help him closely for this.

In our updated educational system, it is required to create a new content of mathematics and use modern methods to study it. If we look at the history of combinatorics, a few thousand years ago in China, they studied the issue of creating magic squares, and in ancient Greece, they studied the issue of the theory of figured numbers. Later, such games as checkers, cards, rush, and dominoes created combinatorial problems. Problems of combinatorics Ghiyosiddin Jamshid Koshi, a well-known mathematician of the Ulugbek school in Samarkand, Umar Khayyam, who lived and worked in the 10th century, and later European scientists, including B. Pascal, J. Cordano, G. Leibniz, Ya. Bernoulli, P. Fermat, L. .It appears in the works of Euler and other scientists. In the 17th century, combinatorics emerged as an independent science in connection with the creation of probability theory.

In order to acquire a profession and choose the right specialty, probability theory and mathematical statistics are studied in schools, lyceums and vocational institutions in all developed countries of the world.

Now the elements of combinatorics are being studied in schools, academic lyceums and vocational schools in the educational system of our republic. However, the content of learning combinatorics elements and its learning methods do not fully meet today's requirements.

Taking into account that combinatorics problems in school mathematics textbooks are not enough for developing strong skills, it is necessary to take into account the preparation of additional training manuals and methodical recommendations in order to help teachers in preparing for classes with students. As a result, opportunities for strong formation, development and modeling of the general logical thinking of the teacher and students appear in the process of reading.

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