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PRE-SCHOOL EDUCATION IN THE CONDITIONS OF MODERNIZATION OF EDUCATION FORMATION OF MATHEMATICAL IDEAS IN CHILDREN THEORETICAL FOUNDATIONS OF THE METHODOLOGY

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Abstract:
The article describes the theoretical foundations of the methodological features of the formation of mathematical concepts in children of preschool age.

Keywords: article, method, mathematics, imagination, child, mind, symptom, sign.

Introduction

Concept is the result of differentiating or generalizing objects and events according to some important features. For example, number, quantity, section, straight line, etc. A symptom (sign) is a property that indicates the similarity, equality or difference of objects or events. Subjects mean objects. Generally, objects have certain critical and non-critical properties. An important property refers only to properties that belong to this object and without which the object cannot exist.

Properties that do not affect the existence of an object are non-essential properties. If there are properties of an object to know what it means, then the concept of this object is said to exist. A concept is named, and it also has content and scope. All of the object
important properties together form the content of the concept. A collection of objects with the same important properties constitutes the volume of the concept. Therefore, the volume of the concept is also a set of objects that can be named with one concept. Mathematical concepts, in turn, arise as a result of generalizing the accumulated experience of mankind and reflect the essence of the material world, but more than many properties of real objects. It is formed as a result of idealization.

The formation of mathematical concepts is recognized as one of the necessary school subjects to prepare children of preschool age to teach mathematics.

The main issue of the theory and methodology of the formation of mathematical concepts in children is the development of didactic foundations of the formation of mathematical concepts in children. This
in turn, it is solved by performing tasks such as in-depth knowledge of the world, learning new methods of thinking development.

Theoretical aspects of the formation of mathematical concepts in children are created on the basis of psychological, pedagogical and other fundamental sciences:

— documents with demonstration programs (instructions on the formation of mathematical concepts in children, etc.);
— methodological literature (articles published in special magazines, for example, educational manuals on preschool education, games, etc.);
- group and individual work, advanced experience and scientific opinions.
Nowadays, the problem of forming mathematical concepts in children has a scientifically based methodical system. The main elements of the system are the purpose, content, methods, work organization form
and methods are inextricably linked. Among them, the main goal is to create an image.
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and methods are inextricably linked. The main goal among them is focused on the formation of imagination.
Formation of mathematical concepts is a pedagogical process of human creative activity.
Its purpose is not only to teach children mathematics, but also to prepare them for life, to help them find their place in life.
The main issues of the science of developing mathematical concepts in children are as follows:
— justifying the plan of conditions for the second junior, middle, senior and school preparation groups from the point of view of the level of development of mathematical concepts in children;
— development of mathematical concepts and determination of the content of preparation for learning school mathematics;
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— development of ways and conditions of development of mathematical concepts;
— to give methodological instructions that ensure the development of mathematical concepts in children. In his work, Gnedenko distinguishes two levels of mathematical ability: "Normal secondary ability" (this ability is the basis for mastering the elementary school course) and "above average ability", that is, it is the ability to easily acquire mathematical knowledge and find the intellectual solution to the problem.
When teaching mathematics, he includes the following factors in educational measures:
1) formation of children's interest in reading, knowledge and skills;
2) explanation of responsibility for the training process;
3) to cultivate confidence in one's own strength and abilities;
4) Cultivating confidence that "mathematics is the ground for the next stage".
In the formation of mathematical concepts, S.I. Schwarzburd distinguishes the following components:
a) development of comprehensive imaging;
b) know how to choose the main thing, know how to think abstractly;
d) know how to move from a concrete situation to a mathematical expression of a question;
e) to know how to analyze and divide into concrete situations;
f) know how to work scientific conclusions on concrete material;
g) to know how to be patient in solving a mathematical problem, to develop deductive thinking skills;
h) know how to ask (put) new questions.
So, the first mathematical abilities are expressed through such human characteristics that make it possible to show high creative activity in the science of mathematics.

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