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## **METHODS OF DETERMINING MATHEMATICAL ABILITY IN STUDENTS**

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**Abstract:** In this article, ideas are presented about the concepts of talent and ability and methods of determining students' mathematical ability.

**Keywords:** Talent, ability, general ability, special ability, determination of mathematical ability, test.

"In today's difficult times, when competition is intensifying on a global scale, modernization and renewal of our country on the basis of scientific achievements and high technologies is becoming our most important task." [1-20].

Implementation of these tasks places great responsibility on teachers. It is necessary for the teacher to make the lesson process interesting, to pay attention to the development of students' budding abilities. The abilities of students are extremely diverse. The quality characteristic of the ability is characterized by what the person's abilities are manifested in relation to, what individual characteristics are a necessary condition for the success of the activity process. According to scientists, mental ability has a complex structure, and it can include cognitive processes of a person, methods of cognition, thinking, analysis and synthesis, comparison, generalization, abstraction, etc. In particular, mathematical thinking is also a component of mental ability.

Talent is a quality of the human psyche that develops systematically throughout life and is determined by the fact that a person has the ability to achieve higher results in one or more areas compared to other people.

In scientific dictionaries, the concept of "talent" is defined as follows

### [Impactfactorsearch 8.4](#)

1) talent is a unique combination of abilities that ensures the successful implementation of activities;

2) talent is the general abilities that determine the scope of a person's capabilities, the level and uniqueness of their activities;

3) talent is a whole individual characteristic of mental potential, learning ability and cognitive abilities;

4) talent is abilities bestowed by nature, the uniqueness of the natural bases of abilities and the levels of their manifestation;

5) talent is the presence of internal opportunities and conditions to achieve high results in activity.

Based on these descriptions, it can be noted that talent is based on the general intellectual and cognitive capabilities of a person, abilities gifted by nature, special abilities that ensure success in a certain activity (for example, educational, creative, professional, scientific).

People with *general abilities* have high intellectual capabilities, they are distinguished by their ability to quickly find a solution to a problem or issue, and a creative approach to their work.

And people with *special abilities* - those who have a talent for a certain type of activity (for example, mathematics, music, drawing, playing chess, sports) and prefer to engage in this activity.

Gifted children are children who combine general and special abilities. They are distinguished from other children by the following signs:

- curiosity;
- constantly looking for answers to various questions;
- rapid development of speech, thinking, memory;
- interested in music, drawing, reading, mathematics from an early age;
- high level of cognitive activity and educational activity;
- persistence and integrity in finding solutions to problems;
- productivity of thinking;

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A number of methods for determining mathematical abilities have been created in special literature. Below we will consider the test for determining mathematical ability.

### **Mathematical Aptitude Test**

You are given a series of numbers. They are located through the laws. Your task is to find the next number of each row (within 10 minutes). Each series is constructed using mathematical operations.

For example, 2,4,6,8,10, the next is 12 because each time it is increased by 2, or 9,7,10,8,11,9,12. Here, since 2 is multiplied by 3, the next number will be 10.

Assignment	Key	
1. 6,9,12,15,18,21?	1-24	6-24
2. 9,1,7,1,5,1?	2-3	7-18
3. 2,3,5,6,8,9?	3-11	18-64
4. 10,12,9,11,8,10?	4-7	9-37
5. 1,3,6,8,16,18?	5-36	10-49
6. 3,4,6,9,13,18?		
7. 15,13,16,12,17,11?		
8. 1,2,4,8,16,32?		
9. 1,2,5,10,17,26?		
10. 1,4,9,16,25,36?		

In conclusion, the teacher should use different methods and methods to develop students' mathematical abilities. Correctly applied methods deepen the knowledge of objective reality and increase the overall and scientific-theoretical level of training. Successively selected teaching methods lead to a certain level of knowledge and professional interest development, activation of independent practical activity.

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[Impactfactorsearch 8.4](#)

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