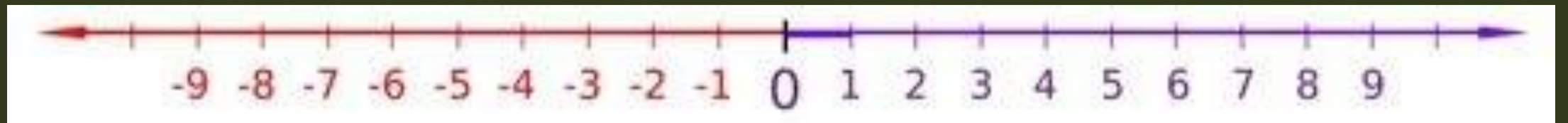


# Learning numbers within 10



**The formation of a certain system of knowledge about the natural number begins with the first class and goes through a number of stages:**

**1) at the first lessons of mathematics (preparatory period), when the knowledge acquired by children before school is checked and systematized, the first steps are taken to introduce into the consciousness of first-graders elements of the scientific foundations of the number**



**2)** the purpose of the account is disclosed in an accessible, clear and practical manner. In the process of counting, children learn the sequence of numerals, work out the technique of counting. First-graders learn to correctly correlate numerals with elements of the set on specific sets consisting of homogeneous and heterogeneous elements; learn that the result of the account does not depend on the order in which the objects were counted. Counting is the main source of getting a natural number in elementary school. Believing, disciple effectively allocates from surrounding his world of multiple a certain number of.




**3)** comparison of numbers is carried out on the basis of ordinal relations on a segment of a natural series: the number which meets at the account later, is more than number which meets earlier, and, on the contrary, the number which meets earlier, is less than number which meets further.

# Formation of computational skills of addition and subtraction in the concentric "Numbers from 1 to 10»



- to master to perfection the skills of oral calculations;
- to master and apply computational techniques consciously, which are based on knowledge of the properties of arithmetic operations and the composition of the number.

**The study of the various cases  
of addition and subtraction  
within 10 involves:**




**- familiarization with the meaning of the actions of addition and subtraction; formation of tabular skills of addition and subtraction in connection with the assimilation of the composition of the number within 10**



**- familiarization with the name of the components and the results of arithmetic operations in addition and subtraction**



**- awareness of the relationship between the components and the results of arithmetic operations (in addition and subtraction)**



**- awareness of the relationship between the components and the results of arithmetic operations (in addition and subtraction)**

# **The formation of computational skills takes place in several stages:**

- 1. The preparatory stage reveals the meaning of addition and subtraction actions based on practical actions with a variety of subjects.**
- 2. Assimilation of ways of formation of any number of the first ten of addition and decrease on unit.**
- 3. The cases of addition and subtraction based on the reception of addition and subtraction by unit and groups of units are considered.**
- 4. Consistently studied various techniques.**
- 5. Problems to increase or decrease the number of several units are solved; problems on the difference comparison of numbers; on the addition (subtraction) of quantities (lengths of segments) on the basis of a subject or schematic illustration.**
- 6. The displacement property of addition is studied.**

## **Pupils acquire the following skills by completing tasks:**

**comparison of sets of objects, numbers and numerical expressions**

**addition and subtraction within 10**

**establishing the relationship between the part and the whole for a given partition**

**solutions of examples on addition and subtraction within 10 containing several actions by means of a numerical segment**

**the division of sets of objects, numbers, numerical expressions into classes (groups) on a given basis**

**establishing the relationship between the components and the result of arithmetic operations of addition and subtraction**

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