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## ORGANIZATION OF MENTAL ARITHMETICS COURSES FOR EARLY CLASS STUDENTS IN SCHOOLS

**Abstract:** The article describes modern methods of teaching mathematics in elementary school in the context of school education in Uzbekistan. he also analyzes methods that were invented and developed by researchers, and discusses their benefits. The relevance of teaching mathematics in the school system is justified.

**Key words:** mathematics, mental arithmetic, scientific circle, preschool education, school education, memory, calculations.

**Language:** English

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### Introduction

“It is clear to all of us that the sun is the beginning of development, the gateway to culture and happiness. Every nation, first and foremost, does not use culture until it rebuilds and replicates the school's primitive, precious have shown for ages[1].

Preschool and primary education play an important role in the organization of the educational process. It is important for primary education officials to be able to motivate young people in these areas of education so that the younger generation can become an expert in their chosen field in the future.

It is desirable for schools to develop mental arithmetic courses for the development of mental and cognitive activities of students attending elementary school, to strengthen their memory, and to stimulate specific sciences[2]. At this age, the child's brain function very quickly and can easily store information in his memory. At this time, it is possible to attract children to mathematics and develop their ability to calculate them quickly[3].

What is Mental Arithmetic? Mental arithmetic emerged in Japan more than two thousand years ago. This method has been developed to develop both

hemispheres of the brain. As a result of the use of specific techniques, the memory of the children has been strengthened, their attention span, and the speed at which different mathematical calculations have been made, even to scientists, has been astonishing[4].

Mental arithmetic is a unique program that promotes the development of intellectual and creative activity of a person. This makes it easier to do special calculations in the brain. Because the method is taught in the age group from 4 to 16, the fact that schools are enrolled in children at the age of 7 and gives them a basic understanding of mental arithmetic at the same time is an indication of the feasibility of these courses. Currently, this method is used in 52 countries around the world.

By introducing this arithmetic in the elementary grades, students develop the ability to think creatively, and they learn how to find the only real solution in voluntary problem situations. Such exercises are conducted by children interacting with each other, dancing and singing, resulting in continuous development of both hemispheres of the brain.

At the school, first grade students are taught items such as letters, letters, and numbers.

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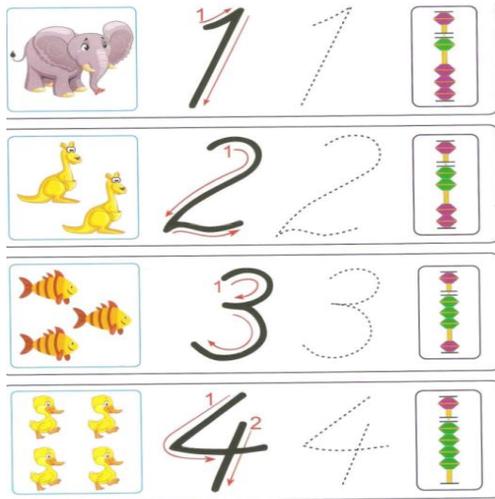
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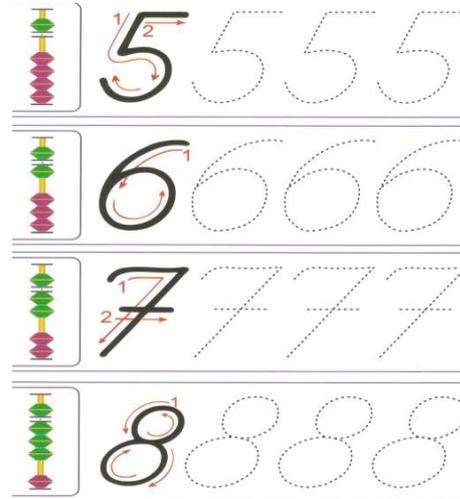
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Mathematics teaches students how to write numbers, apply them, add numbers and decompose them. Therefore, in the first grade students are introduced to

the first concepts in the course of mental arithmetic, such as the use of abacus, the numbering of numbers in the abacus (Figure 1-2)[5].

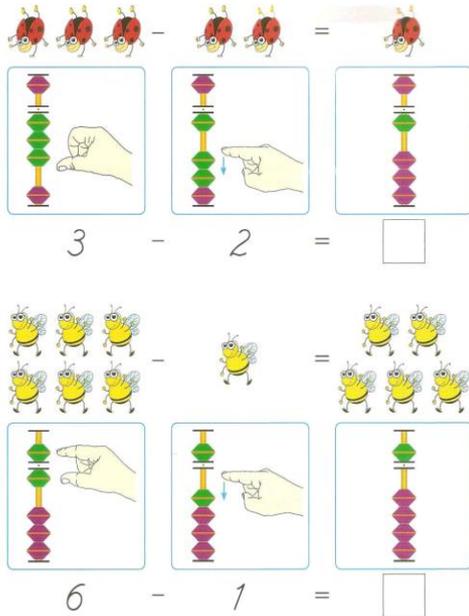


1<sup>st</sup> picture

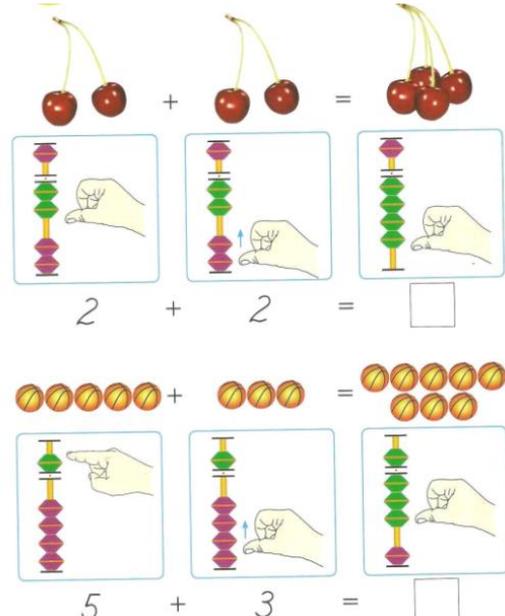


2<sup>nd</sup> picture

After learning how to place numbers in such a way that students can add, subtract, and execute on a number, using abacus as follows (Figure 3-4)[5]:



3<sup>rd</sup> picture



4<sup>th</sup> picture

In Grade 2, students are taught how to add and subtract large numbers of students in abacus, such as speed counts in the brain, and various other exercises during computing. For example, a student can dance while performing calculations, exercise, or play various games at the same time.

By the 3rd grade, both students' cerebral hemispheres are now better equipped to work. At this age, students can easily memorize the chart. They can also perform multiplayer activities through different game activities[6].

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In the fourth grade, the student learns much about the course on mental arithmetic. At this age, it is advisable to work with students on a large scale. To do this, they are taught how to multiply certain numbers. Once students are able to apply these rules consciously, students can develop rules for themselves to act on voluntary numbers.

1. Below are some rules for multiplying a two-digit number[7]:

$$32 \times 11 = 352 \rightarrow 5 = 3 + 2$$

$$53 \times 11 = 583 \rightarrow 8 = 5 + 3$$

When multiplying a two-digit number with no more than 9 by 11, it is possible to create a multiplication by using the same rule as writing the sum of the two-digit numbers. However, we cannot apply this rule for numbers with a number greater than 9.

$85 \times 11 = 8135 \rightarrow 13 = 8 + 5$  The result of this rule would be that. But the answer is not a lot. We use the following method. So if the number of digits does not come out of a single room, then multiply the number by adding the decimal number to the larger room of the two-digit number.

$$85 \times 11 = 935 \rightarrow 13 = 8 + 5 ; 9 = 8 + 1$$

2. Calculate the squares of a two-digit number ending in 5:

$$\begin{array}{r} 35 \\ \times 35 \\ \hline 3 \times 4 = 12 \\ 5 \times 5 = 25 \\ \hline 1225 \end{array}$$

$$\begin{array}{r} 85 \\ \times 85 \\ \hline 8 \times 9 = 72 \\ 5 \times 5 = 25 \\ \hline 7225 \end{array}$$

The above rule shows that the last two digits of the two-digit number of squares are always 25, and the other two numbers are multiplied by the number of decimal places in the decimal number by 1 unit.

3. Multiply the numbers in one room by 10 single digits and the numbers in the room[8]

$$\begin{array}{r} 83 \\ \times 87 \\ \hline 8 \times 9 = 72 \\ 3 \times 7 = 21 \\ \hline 7221 \end{array} \quad \begin{array}{r} 26 \\ \times 24 \\ \hline 2 \times 3 = 6 \\ 6 \times 4 = 24 \\ \hline 624 \end{array}$$

This means that the last two digits of the number are the multiplication of the numbers in the unit room, and the remaining numbers are the numbers generated by multiplying the number in the decimal room by 1 unit by itself.

By gradually teaching students to calculate in such a sequence, they also develop their own photographic memory and creative thinking, focusing on high levels of attention[9].

This, in turn, helps to master both mathematics and other disciplines more quickly and retains them in accordance with certain rules[10].

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