



International Journal for Innovative Engineering and Management Research

A Peer Reviewed Open Access International Journal

www.ijiemr.org

COPY RIGHT



ELSEVIER
SSRN

2021 IJIEMR. Personal use of this material is permitted. Permission from IJIEMR must be obtained for all other uses, in any current or future media, including reprinting/republishing this material for advertising or promotional purposes, creating new collective works, for resale or redistribution to servers or lists, or reuse of any copyrighted component of this work in other works. No Reprint should be done to this paper, all copy right is authenticated to Paper Authors

IJIEMR Transactions, online available on 11th Feb 2021. Link :

<https://ijiemr.org/downloads/Volume-10/Special>

DOI: 10.48047/IJIEMR/V10/I03/23

Title: **TEACHING STUDENTS IN PRIMARY EDUCATION TO SOLVE ARITHMETIC PROBLEMS**

Volume 10, Issue 03, Pages: 99-103.

Paper Authors

Tursunov Q.¹ Rajabov S.² Nurillaev S.³ Turdimurodov O.⁴



USE THIS BARCODE TO ACCESS YOUR ONLINE PAPER

To Secure Your Paper As Per **UGC Guidelines** We Are Providing A Electronic Bar Code

TEACHING STUDENTS IN PRIMARY EDUCATION TO SOLVE ARITHMETIC PROBLEMS

Tursunov Q.¹ Rajabov S.² Nurillaev S.³ Turdimurodov O.⁴

Associate professor of Samarkand State University¹,

PhD of Samarkand State University²,

Teachers of Samarkand State University^{3,4},

Abstract. The role of tables in the study of mathematics science is great, many didactic issues are solved during the course of solving text-based tables with students.

In addition, due to the content of textual issues, patriotism, professional economic, environmental, labor and other disciplines can also be conducted on the basis of visual perception.

Due to such importance in the teaching of textual mathematical questions, we tried to give some methodological guidelines and recommendations on how to solve issues, methods of verifying the solution, drawing up an issue according to the ones given.

Keywords. Matter, solution of the matter, a simple matter, a complex matter, arithmetic method, algebraic method, example condition, question, correct matter, reverse matter, arithmetic actions.

Introduction.

President of the Republic of Uzbekistan Sh.M.Mirziyoev showed that on March 2 of this year only 10% of the hours of classes allocated to specific disciplines in our country were allocated to practical classes, this indicator constitutes 30-50% in developed countries, increasing the scope of practical classes in specific disciplines and further bringing the training closer to practice.

This means that mathematics education is brought closer to practice-it means more study of the mathematical issue that is taken from the daily practical application of students in mathematics lessons.

From many years of pedagogical observations it is known that young primary school teachers are difficult to solve mathematical problems with text. These difficulties are noticeable in analyzing the text of the exercise, in separating complex matter into simple ones, in finding the arithmetic actions that are hidden in the text of the matter,

and in checking the correctness of the solution of the exercise.

This can be demonstrated by the fact that one of the main reasons is the focus on the study of issues in mathematics lessons in the universities, which prepare primary school teachers. However, if we compare the ratio of the mathematical materials in the textbooks of mathematics in the primary classes to the ratio of the examples and the assignment of issues, then more than 50% is devoted to the analysis of matter, their solution and the formation of Independent exercise.

The main didactic objectives of primary education mathematics lessons aimed at solving mathematical problems with text are clearly stated in the program of mathematics of the state educational standard of the Republic of Uzbekistan. These didactic objectives include:

1. During the solution of textual matter, the mathematical language wealth of the readers will increase.

2. Develops mathematical thinking, develops mathematical mind and intellect.

3. Allows you to quickly understand the meaning of arithmetic operations and their properties using software examples;

4. Mathematics provides an opportunity to connect students with daily practical lessons, which in turn increases the interest of elementary school students in learning mathematics;

5. In addition to the above, there is an opportunity to educate students in mathematics, patriotic, economic, environmental, professional and other, depending on the content of the problem during the solution of textual matters.

When it comes to solving math exercise in elementary school, we first need to understand the concept of the matter itself.

A mathematical textual exercise is a question that is answered in such a way that the answer to the given question is within that sentence and is to find the given quantities in the text of the problem.

In short, a mathematical textual problem is an action that encourages one to find a hidden connection between a given quantity and the quantity sought.

It is clear from the definition of the matter that the exercise consists of two parts, the first part of which is the quantity given in the exercise is called the condition of the matter, the quantity sought is the part of the question.

Solving an exercise means finding an answer to a question.

Mathematical text problems are divided into two groups according to their structure. These are simple issues and complex matters.

Such a matter is called a simple matter if it is solved using a single arithmetic

operation, and a complex matter if it is solved using two or more arithmetic operations.

So, by definition, complex matters are made up of a few simple matters.

Text can be divided into two groups depending on the solution of mathematical exercises.

If the solution of a given matter is solved by constructing a numerical expression, such a matter is called an arithmetic problem (because the concept of numerical expression is arithmetic), if the problem is solved by constructing an equation, such a problem is called an algebraic problem (because the concept of equation is an algebraic concept).

Many mathematical exercises can be solved in two ways. It is clear that the division of problems into such groups is conditional, and it is not important how it is solved, but how it is easy and understandable for students to solve the problem.

Problem-solving in primary education is a gradual transition from simple to complex (from simple problem-solving to complex problem-solving).

Solving simple matters is the first stage in the mathematical thinking of first graders, in which the teacher's main task in teaching students to solve mathematical problems is to discover the meaning of arithmetic operations and their properties based on existing mathematical knowledge in children. It must consist of the logical orientation of the sequence of thought in order to give.

Preparatory work should be done before teaching elementary school students the concept of the problem. Such preparatory work is widely covered in the first grade mathematics textbook. Such tasks include: finding the constituents of each natural number; to compare natural numbers; to classify things according to their properties; How much more does it mean to add and subtract? How much less? Here are some

examples of how to look for answers to your questions.

If we look at the first grade math textbook, starting from page 36, there are tasks to create a problem based on the quantities given directly.

In the next stage of reading, there are many tasks to create a problem based on pictures, drawings, numerical expressions.

How much do students spend on such assignments? How much less? How many times more? And how many times less? They will have the skills to understand the arithmetic operations hidden behind their questions and to find the numerical expression used to solve the matter.

In the next stage of working with matters, they realize that by analyzing the text of the matter, it consists of two parts, that there is a correlation between the given quantities and the quantity to be found, and that the problem is solved after the matter is solved.

Once students have sufficient skills and abilities to solve simple matters, they will gradually move on to solving more complex matters.

In this first stage of working on complex matters, the teacher explains to students the difference between a simple matter and a complex matter, how to build a complex matter from simple matter, how to overcome difficulties in dividing a complex matters into simple matters, the sequence of working on each simple matter must learn to find the settings and finally check the correctness of the solution found.

Complex matters in the elementary mathematics curriculum begin to be taught to students from the second grade.

Second graders are introduced to the concept of a text math problem through the text of Problem 8 on page 28 of the math lesson. Let's focus on that.

Exercise - 8. In one house, 29 kg of cabbage, 9 kg less cucumbers and 12 kg more tomatoes than cucumbers were salted. How many kg of pickled tomatoes?

The teacher first describes the solution of the problem in numerical form, telling the students that this is a complex problem because two arithmetic operations must be used to find the solution, and that one simple problem can be created for each operation.

Given

1 cabbage - 29 kg

2 cucumbers- 9 kg less

3 tomatoes - more than 12 kg

Solution: $(29-9)+12=20+12=32(\text{kg})$

If we divide a given complex matter into simple matters, we get.

The first exercise. If there are 29 kg or less of cucumbers in the house, how many kg of pickles are there? Solution $(29-9) = 20$ (kg).

The second exercise. If a house has 20 kg of cucumbers and more than 12 kg of pickled tomatoes, how many kg of pickled tomatoes?

Solution $20 + 12 = 32$ (kg)

The teacher should show the children how to divide and add a matter to a simple matter and how to make numerical expressions using the concepts of "big" and "more" that correspond to our oral speech.

It is also important to note that students need to understand that finding a solution to a complex matter depends on a sequence of simple matters, and that the second matter must be worked out first.

In the later stages of problem-solving, complex problems, consisting of three to four simple problems, are extensively covered in elementary mathematics textbooks.

One of the main tasks in studying problems is to make sure that the problem is right or wrong, that is, to check the correctness of the solution.

Problem-solving is as important for the teacher as it is for the student, so that they can control themselves.

There are several ways to solve problems, two of which are widely used in elementary school math classes. Let's get acquainted with these methods.

Method 1. When solving a correct matter, we construct a matter by assuming that the answer is an existing number and one of the exact numbers given to the matter is an unknown number, which is the inverse of the given matter. If the quantity formed by solving the inverse problem gives a quantity in the correct problem (depending on the question asked), then the given correct problem is considered correct and processed.

Method 2. It is a way to check the correctness of a solution by substituting the solution for the matter in place of the problem.

The second method is one of the easiest ways to check, and you can put it in place and check the correctness of the solution.

We examine here an example of the first method of checking the solution of a matter.

Exercise - 2. If 28% of the rice is whitewashed, how many kg of rice must be whitewashed to get 144 kg of rice?

We solve the matter using proportion.

If we say that the rice required to obtain 144 kg of rice is x kg, then 144 kg of rice is 72% of x kg of rice (because $100\% - 28\% = 72\%$).

From the above we can draw the following proportions.

$$72\% \text{-----} 144 \text{ kg}$$

$$100\% \text{----} x \text{ kg}$$

And that's it

$$X \cdot 72 = 144 \cdot 100$$

$$X = 144 \cdot 100 / 72 = 2 \cdot 100 = 200 \text{ (kg)}$$

So, to get 144 kg of rice, 200 kg of rice has to be justified.

Let's see if we can figure it out.

If we look at the condition of the matter, we see that there are two 28% and 144 kg quantities. Assuming that none of these quantities (its place in the verification of its solution is unknown) is unknown, we take the found solution as a definite quantity instead of the matter and create a new matter, the inverse of the given matter.

Exercise - 3. (Inverse matter)

If 144 kg of rice is obtained from 200 kg of rice, what percentage of rice is it?

We use proportion again to solve the matter.

$$200 \text{ kg} \text{----} 100\%$$

$$144 \text{ kg} \text{----} x\%$$

From this:

$$200 \cdot x = 144 \cdot 100$$

$$X = 144 \cdot 100 / 200; \quad x = 72$$

This means that 144 kg of rice makes up 72% of 200 kg of rice.

The exercise was solved correctly, because 72% of the matter was solved.

REFERENCES

1. B. Abdullayeva va boshqalar. Matematika. Toshkent, 2014.
2. N. Hamidova va boshqalar. Matematika. Toshkent, 2007.



3. M. Y. Jumayev va boshqalar. Boshlang'ich sinflarda matematika o'qitish metodikasi. Toshkent, 2005.
4. L.P.Stoylova va boshqalar. Boshlang'ich matematika kursi asoslari. Toshkent. O'qituvchi. 1991.
5. O'zbekiston ovozi. Ijtimoiy-iqtisodiy gazeta. N/3. 2020, 3-mart bosh maqola.
6. M.Axmedov va boshqalar. Matematika. 1-sinf darsligi. Turon. Toshkent. 2019.
7. A. Abdurahmonova va boshqalar. Matematika 2-sinf darsligi. Yangiyo'l poligraf servis.2018.