

Teaching to Solve Some Typical Arithmetic Problems in Primary Class Mathematics Course

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Abstract:

This article describes the role of arithmetic problems in teaching first graders to creative thinking and methods of teaching them to solve arithmetic problems.

Keywords: matter, arithmetical task, arithmetical action, example, task.

Independent Uzbekistan strives to join the world economic-political, scientific-technological and spiritual-educational integration as an independent and active subject have.

Analyzing the mathematics teaching program in the secondary general education school, there are such typical problems in the mathematics course, especially in the 5th grade mathematics curriculum, that in order to solve these problems, the student from the threshold of primary education requires the ability to solve arithmetical problems. Below we will explain the methodology of teaching to solve problems of finding two (or several) numbers according to their sum and difference.

A special case of problems of this type: the problems of finding these numbers according to the sum and difference of two numbers can be found in elementary school mathematics textbooks.

Problem: Lola and Ali have a total of 970 soums. Lola's money is 30 soums less than Ali's money. How much money do they each have?

Such issues are unknown when viewed from the outside 2 system of linear equations

$$\begin{cases} a + b = 970 \\ a - b = 30 \end{cases}$$
 (here a is Ali's money, b is Lola's money), and there are specific solutions to

problems of this type.

We will solve the above problem by discussing with the students.

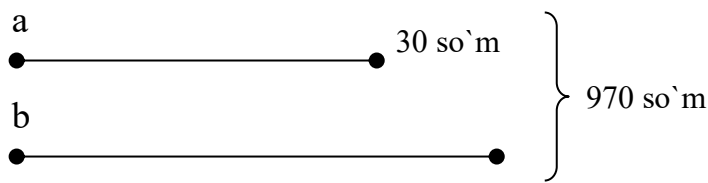
- What are the students talking about?
- They are talking about Lola and Ali's money.
- How much money do Lola and Ali have together?
- Yes
- how much
- 970 soums
- Y a na in the matter what given ?

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- Lola's money is 30 soums less than Ali's money.
- What is the problem asking us to find?
- In Lola and Alida how much money what is there ?

Our observations result as that's it we emphasize that many teachers this to the discussion of the type issue they suffer Because , the present discussion in the style of question and answer continue and the following : " To the question of the matter how answer will we give ?" , " Him how shall we find ?" such inappropriate questions prevent the student from understanding the specific features of the new type of problems that have not been mastered by the student, cause them to give incorrect solutions ; that is, the student can give the following answers. "Subtract 30 from 970" or "Add 30 to 970". But he cannot justify why he chose these actions. It is as if he must perform some action on the two numbers given in the problem.

In this case, the teacher may give the following instructions. That is, after the guiding questions and answers, "Students read the text of the problem again carefully. Who has more money? (Alida). Who has little money (in Lola). Conditionally, we mark the money in Lola a with a section, and the money in Ali with another longer b section, that is, we give a graphic condition to the problem:



Since Lola's and Ali's money is 970 soums, we set them together as 970 soums. The amount of money in Lola is 30 soums less than the amount of money in Ali . This model is an important tool in the search for a solution to the problem. Now let's continue the discussion.

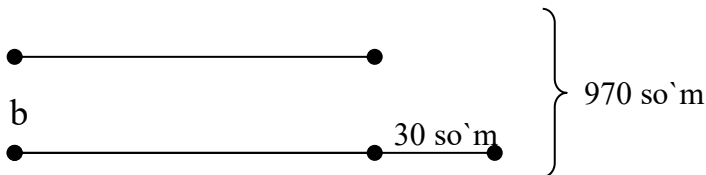
- In Lola As in Ali money when it was in both how much money will be was _
- (970+30) soums
- Can you find out how much money Ali has?
- Yes
- How to divide the sum of 970 and 30 by 2
- Can you find out how much money Lola has?
- Yes, how, subtracting 30 from the money in Ali
- So what is the problem ? the work with solved ?
- 3 jobs with (First add , second to be the third subtraction deeds with)

solution to the problem as follows describe :

- 1) $970+30 = 1000$ (soums)
- 2) $1000:2=500$ (soums)
- 3) $500-30=470$ (soums)

Answer : 500 soums in Ali , 470 soums in Lola there is money .

This issue two method with solve with the 2nd method , saying that it is possible solve students by independent execution Demand students independent thinking increases. Problem the solution this method question put to the question answer to find in the style of discussion we walk For this, we express the graphical condition of the problem as follows :



1) How much money would both of them have if Ali's money was the same as Lola's?

$$970-30=940 \text{ (soum)}$$

2) How many soums were in the tulip?

$$940:2=470 \text{ (sum)}$$

3) How much money did Ali have?

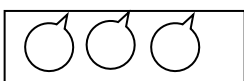
$$470+30=500 \text{ (sum).}$$

Answer: 470 soums in Lola, 500 soums in Ali.

Draw the students' attention to the fact that they have solved the problem correctly and tell that in both ways Ali has 500 soums and Lola has 470 soums, while satisfying the condition of the problem, that is, $500+470=970$ and $500-470=30$. It should be noted that $470=30$ soums.

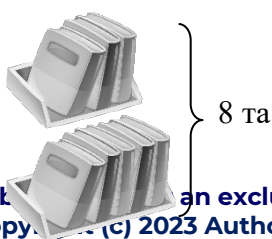
It is worth noting that the preparation work for problems related to the addition and subtraction of two numbers is long ago, that is, students who have just entered school learn to add and subtract within 10 in the 1st grade. starts from the learning period.

Later, students will learn to add and subtract within 10, put pictures of 5 red apples and 3 yellow apples on the 1st row of the canvas, compare them and find out how many apples there are: $5+3=8$ apples.



Gradually, the students put 3 pictures of pomegranates on the first shelf, and on the second shelf there is a closed pomegranate and 2 pictures of apples next to it. They find out how many pomegranates are on the second shelf. They determine how many pomegranates are on both shelves. Such

work will strengthen the concept of "as much as it is" and will strengthen the skills of addition within 10. It is advisable to continue working on such assignments in the 2nd grade, and in the 3rd grade, students should complete such tasks within 100. Students of the 3rd grade have learned table multiplication and table division. Therefore, in the 1st quarter of the 3rd grade, using demonstration, using addition and subtraction operations within 20 (initially within 10), the following The issue is given to students for discussion.



There are 8 books on two shelves. The number of books on the first shelf is 2 more than on the second shelf. How many books are there on each shelf?

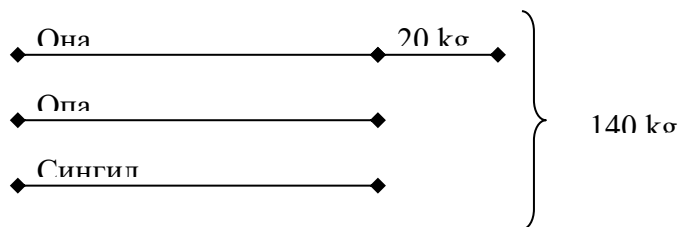
In order to solve such a problem, it is advisable to use computer technologies as much as possible, or to use a demonstration tool.

The resolution of this issue will be discussed as mentioned above. The need to solve the problem in 2 ways is conveyed to the students. With this, the students get acquainted with the new "Typical" arithmetic problem, the problem of finding these numbers according to the sum and difference of two numbers. (Students do not need to know the name of the type, but the teacher must know.)

Gradually, students learn to solve problems of this type with numbers within 100. In the 4th grade, students can get acquainted with the problems of finding these numbers using the sum of three numbers and their differences.

The following issue will be of interest to readers:

Issue: The mother picked more than 20 kg of cotton from each of the sisters. If the mother and daughters picked 140 kg of cotton together, how many kilograms of cotton did the sisters pick each?



The graphic model of the issue is important for the discussion of this issue. Since the mother picked more than 20 kg of cotton from each of the sisters, we can tell that the sisters picked the same amount of cotton. Therefore, it is appropriate to express the cotton they picked in the same size sections. Since the mother picked more than 20 kg of cotton from each of them, the 3rd section to be drawn will be longer than the 1st and 2nd sections. We will continue our discussion on the condition of the record stating that they picked 140 kg of cotton together. If the mother picked cotton as the sisters picked, the total picked cotton would be reduced by 20 kg, and all three of them would have picked the same amount of cotton. So, if we subtract 20 from 140 kg and divide by 3, the cotton picked by each sister will come out.

Solution: 1) $140 - 20 = 120$ (kg)

2) $120 : 3 = 40$ (kg)

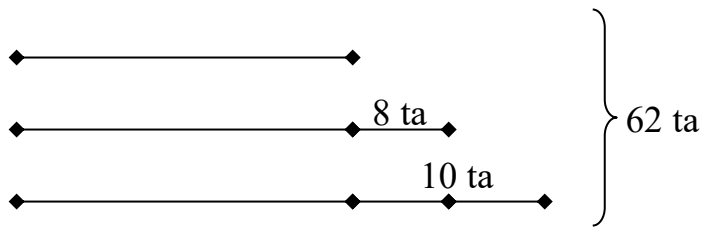
Answer: Each of the sisters picked 40 kg of cotton.

The next step is to get acquainted with the problems of finding these numbers according to the sum of three numbers and the differences of pairs of these numbers.

Matter. There are 62 apples in 3 vases. Apples in the 2nd distribution are 8 more than the apples in the 1st distribution and 10 less than in the 3rd distribution. How many apples are in each box?

If the text of this problem is mastered by the students, we will create a graphic model consisting of three parts. The least number of apples is in distribution 1, which has 8 fewer apples than distribution 2, or distribution 2 has 8 more apples than distribution 1. For this reason, we conditionally express the number of apples in the 1st distribution, which has the least number of apples, with the 1st cut. Since there are 8 more apples in the 2nd distribution, we draw the 2nd

section longer than the 1st section. Since there are 10 more apples in the 3rd distribution than in the 2nd, the 3rd cut will be longer than the 2nd cut. They are 62 apples in total.



We will solve this problem in 3 ways.

Method 1: What would be the total number of apples if the 2nd and 3rd distributions were the same as the first distribution?

$$62 - 10 - 8 - 8 = 36 \text{ (each)}$$

2) How many apples are there in the first distribution?

$$36 : 3 = 12 \text{ (ones)}$$

3) How many apples are there in the second distribution?

$$12 + 8 = 20 \text{ (each)}$$

4) How many apples are there in the third distribution?

$$20 + 10 = 30 \text{ (each)}$$

Answer: 12, 20, 30.

Method 2: How many apples would be on the three plates if there were apples in the 1st and 3rd distributions as in the 2nd distribution?

$$1) 62 - 10 + 8 = 60(s)$$

2) How many apples are there in distribution 2?

$$60 : 3 = 20 \text{ (each)}$$

3) How many apples are there in distribution 1?

$$20 - 8 = 12(s)$$

4) How many apples are there in distribution 3?

$$20 + 10 = 30(s)$$

Answer: 12, 20, 30

Method 3:

1) How many apples would there be in all three plates if there were apples in the 1st and 2nd distributions as in the 3rd distribution?

$$62 + 8 + 10 + 10 = 90(s)$$

2) How many apples are there in distribution 3?

$$90 : 3 = 30(s)$$

3) How many apples are there in box 2?

$$30-10 = 20(s)$$

4) How many apples are there in the 1st section?

$$20-8 = 12(s)$$

Answer: 12, 20, 30.

Let's consider the following issue.

Students of the second, third and fourth grades of the school participated in the work of greening the city and planted a total of 912 trees. 3rd graders planted 30 more seedlings than 2nd graders, 4th graders planted 27 more than 3rd graders. How many trees did each class plant to green the city?

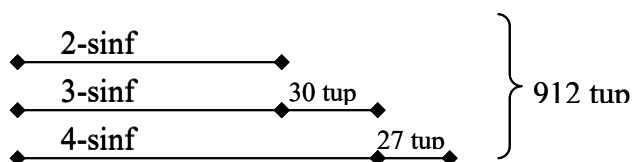
We give a short condition of the problem.

To give the condition, we think as follows. It is clear from the condition of the problem

4th grade planted the most saplings, followed by 3rd grade and 2nd grade who planted fewer saplings. we draw representative sections.

Students know that this problem can be solved in 3 ways.

According to the previous problem, a more convenient way to solve the problem is "if the number



of seedlings planted by the second and fourth graders was the same as in the third grade, how many saplings would have been planted by all three graders together?" " It is appropriate to find an answer to the question.

It is clear from the diagram that when the students of the second and fourth grades planted seedlings as well as the students of the third grade, the total number of seedlings

(912+30-27) would be.

Solution:

1) $912+30-27 = 915$ (ta)

2) $915:3=305$ (the) number of seedlings planted by 3rd grade students.

3) $305-30=275$ (number) of seedlings planted by 2nd grade students.

4) $305+27=332$ The number of seedlings planted by 4th grade students.

The answer is 275,305,332.

The following can be mentioned as specific features of problems of the type "Finding these numbers according to the sum and difference of two (or several) numbers":

- the sum or difference of two or more numbers is always given in the problem, and it is required to find these numbers themselves.
- it will be convenient to describe the short condition of the problem in a graphic form.
- the solution begins by equalizing sections of arbitrary length assumed conditionally.

- The number of sections of arbitrary length accepted conditionally is equal to the number of unknowns.
- The more unknowns are involved in the problem, the more ways the problem can be solved.

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