

ANALYSIS OF LOGICAL PROBLEMS GIVEN IN PRIMARY CLASS MATHEMATICS TEXTBOOKS

Abdurhmonova Diyora Akbarjon qizi
Andijon Davlat Pedagogika Instituti 2-Bosqich Magistranti

ABSTRACT

This article covers the basic concepts of Logical Thinking. The science of logic, its essence, history of origin, basic laws, forms of thinking, the place of logical thinking in our life, development of logical thinking ability in mathematics classes, and analysis of logical problems in textbooks are presented. The main goal of the work is to form students' ability to think logically in the classroom and outside of the classroom, and thereby educate competitive young people.

Keyword: Logic, thinking, judgment, logical problems.

Mathematics is one of the factors that have a strong influence on raising the thinking process of students to higher levels. We know that the main goal of learning for each of us is to develop, grow, progress, and build a beautiful life in every field. That is why the most advanced experiences are being studied and applied to our current life. It is clear that the more knowledge we gain, the more our mind, imagination, life, and world of thought develop, and it opens the way to the disappearance of various problems in our life, and to the improvement of our personal and professional activities.

"It is clear to all of us that the way to the human heart, first of all, education begins with upbringing. "We rely and rely on such hard-working professionals to fulfill the responsible task of educating a new generation and new thinkers in our country. We realize how invaluable their service is in shaping the spiritual world of the youth who will come to us tomorrow." our first president I.A. Karimov. Based on this, we young personnel, and all teachers, should pay attention to the development of important skills such as logical thinking, creativity, and free thinking in educating and teaching primary school students. As much as we want our students to be well-rounded, we should try to reveal and develop their hidden abilities. Including, the more we form the ability of logical thinking in the child, the easier we can achieve our goal. Logical thinking greatly helps the child to master all subjects easily, to increase interest in lessons, and to reveal hidden abilities.

One of the main factors of the current reforms in our country is to teach every person to think and analyze logically. Logical thinking is inextricably linked with the science of logic and its history. And the science of logic has appeared and developed since ancient times. In particular, the first ideas about the science of logic were mentioned in the works of ancient Greek scientists such as Perminid, Aristotle, Demokrit, Platon, and Sokrates. After that, scholars such as Abu Nasir Farabiy, Abu Ali ibn Sina, Abu Rayhan Beruniy, Alisher Navoiy, Bedil, and Umar Hayyom deeply interpreted the science of logic with the help of their works. In this way, new directions of the science of logic began to be studied in the new medieval Europe. T. Gobbs, V. Leibnist, V. F. Gegel, I. Kant, R. Deskartes, F. Bakon contributed to this process. In our country, M.M. Hayrullayev, E.Yu. Yusupov, V. Qobulov, I. Rahimov, M. Sharipov, O. Imomkho'jayev, D.

Fayziho'jayeva and other scientists have conducted scientific research on the science of logic in our country.

The origin of the word "logic" is considered to be an arabic word (corresponding to the Greak term "logic"), meaning "thought", "word", "reason", "law". Its multiple meaning is reflected in the expression of various things. In particular, the word logic was used to express, firstly, the laws of the objective world, and secondly, the forms of existence and development of thinking, including the set of rules characterizing the relationship between thoughts.

Thinking is the main source of the science of logic. "Mentality" is derived from the arabic word, which corresponds to the meanings of "thinking", "mental knowledge". The concept of thinking is the highest level of learning. In order to gain a deeper understanding of the essence of thinking, it is necessary to consider and determine the role of knowledge in the activity of learning, the relationship of the process of knowledge with other types of forms. The activity of cognition consists in the formation of subjective, different images of the surrounding events, as well as the reality in the activity of the individual's brain. It is very important to connect the basic content and purpose of knowledge activity with the process of practice.

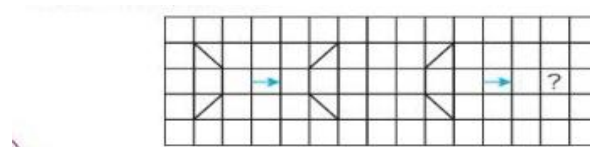
In almost all cases, knowledge is somehow closely connected with the entire life process of each person, subordinated to the understanding of things that eliminate this or that need. People are in the process of learning and learning. Undoubtedly, they set specific goals for themselves, and these goals determine the scope of the subjects we need to study, the form, stage, direction and methods of research. Here, by explaining and analyzing the concept of "thinking", we can fully understand and understand the science of "logic". As for the concept of thinking, its main meaning can be clarified as follows.

Thinking is the creative thinking process of mankind. In this process, the activity of knowledge and perception takes place with the creation of objects, events, and objects that are abstract in existence, and with the construction, creation, and construction of things that will be important in every field. Through this, we can study any characteristics of existing objects and events in the environment and predict the future in advance through the generated concepts.

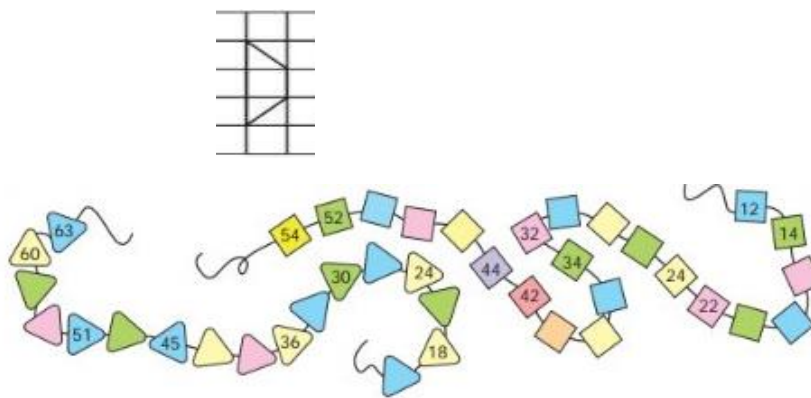
The quality of education has become the most important thing nowadays. During the last 5 years, our president paid special attention to each stage of the educational process. In particular, the updating of school textbooks, the introduction of international assessment programs into schools, the organization of examinations in subjects and hundreds of similar new changes can be a clear example of this. On October 1, 2021, during the process of congratulating the teachers-coaches of our nation, the head of state mentioned that the teaching programs will now be changed and school textbooks will be adapted to world standards and will be changed. He informed about the step-by-step transition of every school in our country to the "National Curriculum" by 2026-2027. The main goal of this is to improve the quality of education and educate competitive young people. At this point, it should be said that the updated textbooks are aimed at making the student acquire knowledge through thinking. Currently, mathematics textbooks of grades 1-4 have been completely updated and put into use. There is a significant difference between these new textbooks and previous mathematics textbooks. Below we will consider logical problems and their solutions given in primary school textbooks.



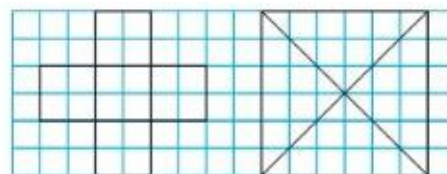
In this 3rd exercise given on page 30 of the 2nd grade textbook, they should continue the consecutive forms according to the rule. So, the given 4 forms are placed in the next 4 free places according to the given order.



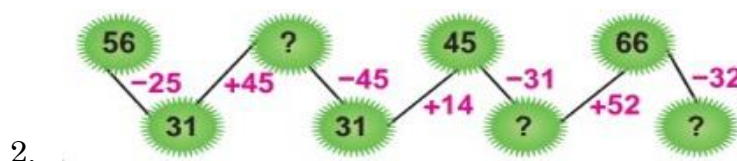
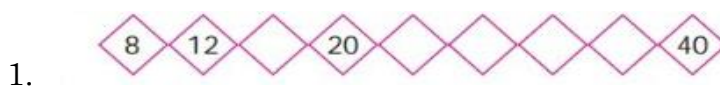
In this exercise, based on the sequence, instead of the question mark, the following form is put:

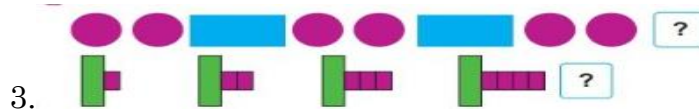


When completing this sequence, the student must create a logical connection between the given numbers. The numbers in our first form are decreasing by 3, so we can fill in the blanks by subtracting 3 from the given numbers. In the second form, the numbers are reduced by 2. So, we can put the following numbers in the empty cells. Form 1: 57, 54, 48, 42, 39, 33, 27, 21, 15; Form 2: 50, 48, 46, 40, 38, 36, 30, 28, 26, 20, 18, 16.

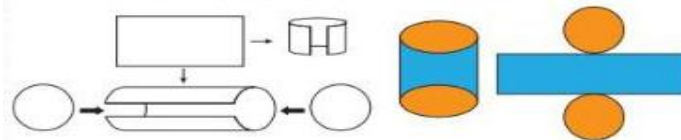


In this task, he must draw over the shape once without letting go of his hand. This exercise teaches the student to imagine and think through actions.

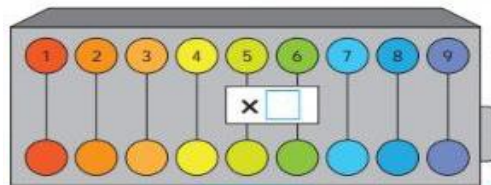




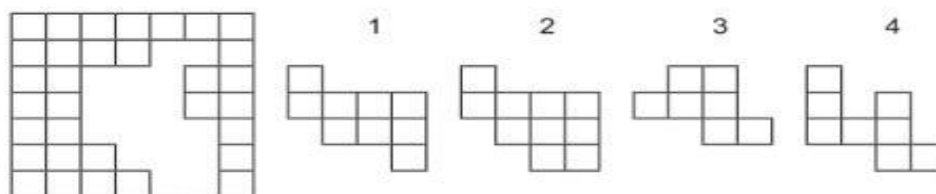
These examples given in the textbook can correspond to the elementary view of the laws of logic. In Example 1, the student finds the sequence using the associative rule. In example 2, it goes through the steps by doing the steps correctly. Example 3 continues the sequence by finding the common property of the shapes defined. For example, two circles and one rectangle are repeating, so a question mark is replaced by a rectangle. In the second question mark, there is a green column and an increasing number of pink rectangles attached to it. Based on this, it is concluded that the following figure is 5 pink rectangles.



It is safe to say that these exercises given on page 64 serve to enrich the student's imagination and level of understanding. In task 1, the student has an understanding of the shape of a cylinder and its similarities with other objects, and at the next stage, he will learn about the process of creating a cylinder shape and its parts. This also helps the student to identify logical connections between existing objects and to create understanding.



By following this example on page 79, the student will think and fill in the blanks with the correct numbers. In general, all types of examples in mathematics force the student to think. Because the student cannot imagine them in his mental activity without having information about numbers and rules, he does not understand the given problems.



If we place any 2 shapes in a hollow square, this square will be filled. Answer: 2 and 3.



In the given example, there are 151 houses, because if we divide 453 into three equal parts, 151 will be produced. To find house and tree, $151 + 151 + \text{house and tree} = 350$, so house and tree are

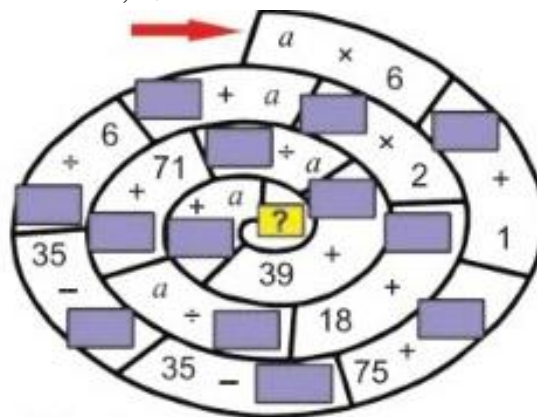
$350-302=48$. Then we use this to find our unknown number. $Picture+48+48=180$, $180-96=84$. And the next operation is $48+84+151= 283$. Answer: 1)283, 2)330.



In the above example, it is necessary to find the connection between the numbers to continue the sequence. The numbers are increasing first by 8, then by 7, so we find the answer by adding 8 to 56. Answer: 64



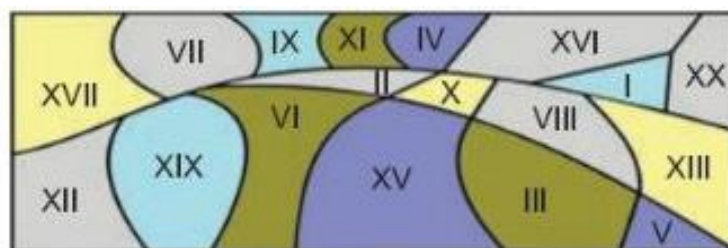
Change the position of one stick so that the resulting equation is correct. Answer: 1) convert the number IV to VI in the answer, 2) convert the number XI to IX, 3) convert the number IX to XI.



If $a=4$, find the unknown number. In this case, we find the unknown number by putting the number 4 instead of a . Answer: 83.

30	-	b	=	a
+		+		+
c	-	a	=	150
=		=		=
190	-	30	=	c

We determine the numbers corresponding to a, b, c . Answer: $a=10, b=20, c=160$



Let's find out the missing numbers. Answer: VII, XIV, XVIII.



The hours are listed in a logical sequence. What time should the 7th hour show?

Answer: 4:15.

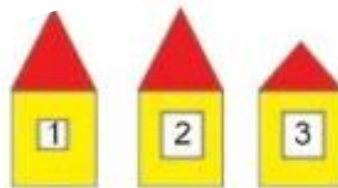


We determine the keying states of the forms. Answer: 1) triangles pointing down, 2) triangles pointing down, 3) two triangles pointing down and a triangle pointing to the left, 4) triangles pointing to the left.

Shakllarni parallel ravishda ustma-ust tushirganda hosil bo'ladigan tasvirni aniqlaymiz.



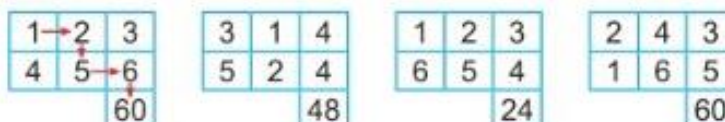
Let's determine the image that will be created when the shapes are placed on top of each other in parallel. Answer: 1) green, rectangle with orange triangles, 2) yellow, rectangle with green triangles, 3) red, rectangle with green triangles, 4) orange, red yellow, 5) red, round green, 6) orange, green, red.



Three shapes - a triangle, a hexagon and a circle live in three houses: with a high roof, but with small windows; high roof and large windows; low roof and large windows. A triangle and a circle live in a house with large windows, a circle and a hexagon live in a house with a high roof. How many houses does each shape occupy? Answer: triangle-3, circle-2, hexagon-1.



We will determine the unknown number. Answer: 4th circle 16, 5th circle 16.



We combine the four numbers that form the product. Answer: 2) $3*1*4*4=48$, 3) $1*2*3*4=24$, 4) $1*4*3*5=60$

$$\begin{array}{r} + \quad a a b \\ \quad b a b \\ \hline 9 3 6 \end{array} \quad \begin{array}{r} + \quad b c a \\ \quad a c b \\ \hline 9 c 9 \end{array} \quad \begin{array}{r} \times \quad a x 6 \\ \quad \quad \quad x \\ \hline 7 b c \end{array}$$

What numbers are suitable instead of letters. Answer: $b=8$, $a=1$, $c=0$, $x=5$.

In short, logical problems help to enrich the student's world of imagination, to understand the whole existence correctly, to make correct judgments and conclusions. Logical thinking helps to ensure the comprehensibility of the subjects taught in general education schools, the quality acquisition of the knowledge the student receives, the development of his ability to observe, and to express his knowledge in a consistent, clear, and understandable way.

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