

# General Concepts of Mathematics

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**Abstract:** *Mathematics, like all sciences, studies all the processes that take place in all beings. From this, it is natural to conclude that there is a mathematical expression for this process that takes place. For example, students' mastery, flight, student behavior, air temperature, and various economic issues are studied using special equations. In particular, the science of geometry, a branch of mathematics, examines and teaches the geometric properties of objects, regardless of their color, weight, or density.*

**Keywords:** Students' mastery, flight, student behavior, air temperature and various economic issues are studied using special equations.

## INTRODUCTION

### 1. Goals and objectives of the topic.

Let's get acquainted with simple and complex considerations. Man perceives nature, as well as the various connections between objects. These connections are expressed through concepts and feedback. For example, "All angles in a right rectangle are equal", "36 is divisible by three", "It's raining", "Uzbekistan gained independence on the first day of September 1991", "2003 - the Year of Prosperous Neighborhood »,« 2004 - the Year of Mercy »,« 2009 - the Year of Rural Development and Prosperity ». Each review is characterized by content and logical structure. In mathematics, simple and complex considerations are learned. For example, the statement "36 is divisible by 3" is simple. For complex considerations, the number 21 is divided into odd and 7, or the number  $a$  is equal to or greater than 3, or the second phase of the National Training Program is the quality phase, and so on.

1-for example. Analyze the definition of a square.

2- example. Akbar did not do his homework in math and got 2 marks in class. Determine the logical structure of the feedback.

## METHODS

1- example. Analyze the definition of a square.

**Y e c h i s h.** "A rectangle with equal sides is called a square." First a square is drawn, then a rectangle is introduced, which includes the properties of being equal on all sides. From the definition of a square, it is clear that it is a special case of a rectangle. It follows that a square and a rectangle are homogeneous concepts.

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Complex feedback is formed using simple feedback using the words "and", "or". These words are called logical connections in mathematics.

2- example. Akbar did not do his homework in math and got 2 marks in class. Determine the logical structure of the feedback.

**Y e c h i s h.** This review consisted of 2 simple comments: comment A "Akbar did not do his homework" and comment B "received 2 marks in the lesson". They are made up of a single complex concept and a link. This is abbreviated as "A and B", but the comment "B and A" is not always appropriate.

## RESULTS

A concept is the result of distinguishing or generalizing objects and events according to certain important features. For example, "number", "quantity", "cross section", "straight line" and so on.

A sign is a property that indicates the similarity, equality, or difference of an object or event. For example, the sign of a triangle being equilateral can be expressed as follows: "If the medians of the bases of a triangle are equal to each other, then the triangle is equilateral."

Objects mean objects. Typically, objects have certain important and insignificant properties.

An important property is a property that belongs only to that object and without which the object cannot exist. For example, for an arbitrary triangle, the property "parallel to the base of the triangle and equal to half of its base" is an important property.

Properties that do not affect the existence of the object Non-essential properties h is calculated. For example, for equation  $2 \cdot x = 4$ , the property that "if we add both sides of the equation to the same number, the result does not change" is an important property.

If an object has properties to know what it means, then it is said that there is an "concept" about that object. The concept is named and also painted with content and volume.

All the important properties of the object together form the content of the concept. A set of colored objects with the same important properties constitutes the scope of the concept. So a concept is a collection of rich objects that can be named by a single concept. For example, the concept of "triangle" is general for the concept of "right triangle", and the concept of "right triangle" is a special case of the concept of "triangle".

Concepts arise as a result of the generalization of the great experience of mankind and reflect the essence of the material world, but as a result of their idealization, ignoring many properties of real objects.

Describing a concept is to show the properties of an object that are sufficient to know it.

## DISCUSSION

Complex feedback is formed using simple feedback using the words "and", "or". These words are called logical connections in mathematics. Let's get acquainted with simple and complex considerations. Man perceives nature, as well as the various connections between objects. These connections are expressed through concepts and feedback. For example, "All angles in a right rectangle are equal", "36 is divisible by three", "It's raining", "Uzbekistan gained independence on the first day of September 1991", "2003 - the Year of Prosperous Neighborhood », « 2004 - the Year of Mercy », « 2009 - the Year of Rural Development and Prosperity ». Each review is characterized by content and logical structure. In mathematics, simple and complex considerations are learned. For example, the statement "36 is divisible by 3" is simple. For complex considerations, the number 21 is divided into odd and 7, or the number a is equal to or greater than 3, or the second phase of the National Training Program is the quality phase, and so on.

## CONCLUSION

Concepts arise as a result of the generalization of the great experience of mankind and reflect the essence of the material world, but as a result of their idealization, ignoring many properties of real objects.

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