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TEACHING ALGEBRA AS A FACTOR FOR DEVELOPING STUDENTS' THINKING AND PRACTICAL SKILLS

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Algebra is one of the most basic and important branches of mathematics, which studies numbers, variables and their relationships. Teaching algebra not only strengthens mathematical knowledge, but also develops students' analytical and logical thinking skills. The role of algebra in secondary education is very important, because algebra is the entry point to other branches of mathematics. Therefore, information about the goals and objectives of teaching algebra, as well as its main purpose in secondary education, is very important.

1. Objectives of teaching algebra

The main objective of teaching algebra is to form algebraic knowledge and skills in students, develop their mathematical thinking, and acquire the skills to apply algebraic methods in practice. It is necessary to give students reliable knowledge in understanding algebraic expressions and formulas, working with them, and solving algebraic equations and inequalities.

The main goals of algebra are (figure 1).

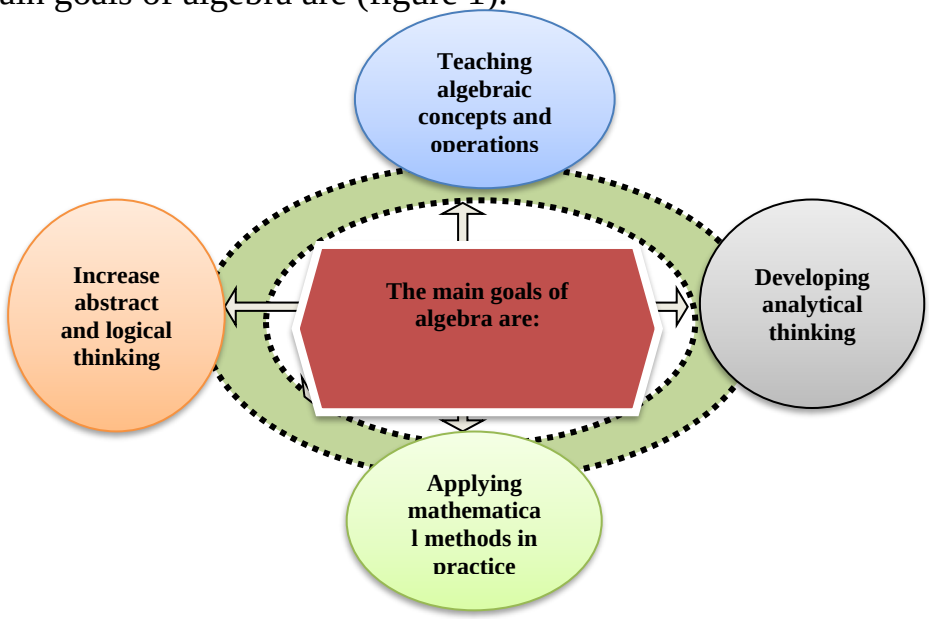

Figure 1

• **Teaching algebraic concepts and operations**: To explain algebraic expressions, equations, multiplication, division, and other algebraic operations to students. To teach them the basic elements of algebraic models.

• Develop analytical thinking: Algebra helps students develop analytical thinking, which is useful in choosing different paths and methods when solving problems.

• **Practical application of mathematical methods:** Algebra is often used to solve mathematical problems, for example, in economic problems, technical problems, and other areas. By teaching algebra, students are prepared to solve various practical problems.

• **Increases abstract and logical thinking:** Algebra teaches students to grasp complex concepts and express them clearly and concisely. This helps to form a positive attitude towards mathematics in the future.

2. Tasks of teaching algebra (figure 2)

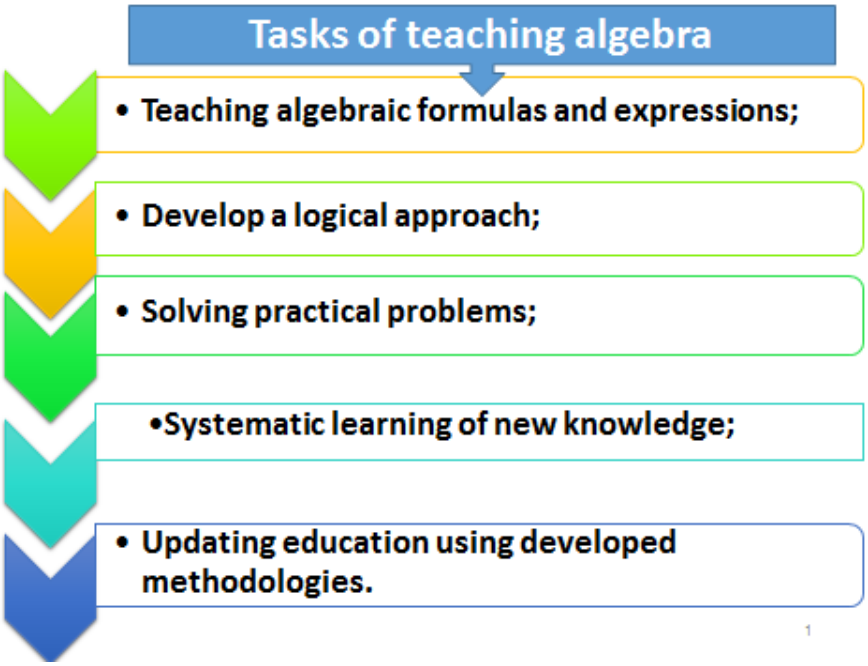

Figure 2

In order to effectively teach algebra, along with the objectives, the teacher is required to perform the following tasks:

• **Teach algebraic formulas and expressions:** Teach students algebraic formulas, variables, and mathematical operations. They will develop skills in solving mathematical problems based on algebraic equations and expressions.

• **Develop a logical approach:** Algebra develops students' logical thinking and analytical skills. In solving algebraic problems, it is necessary to use a logical approach to select the main steps and through them to reach a solution.

• **Solving practical problems**: Algebra is used in many practical fields. For example, in economics, computer science, physics, biology, etc. Teaching students how to apply algebraic problems in practice helps to consolidate their knowledge.

• **Systematic learning of new knowledge:** Algebra teachers should teach students new concepts in a step-by-step, systematic manner. It is effective to teach students from basic algebraic concepts to more complex problems.

• **Updating education using developed methodologies:** It is necessary to use new methodologies, technologies and pedagogical approaches to update and improve students' algebraic knowledge. Interactive teaching methods, visual materials and practical exercises play an important role in this process.

3. The main goal of teaching algebra in secondary educational institutions

The main goal of algebra in secondary educational institutions is to teach students not only algebraic operations, but also to develop the skills to apply the knowledge acquired with them in everyday life. Algebra is one of the main processes of mental development in students, because this subject increases the students' ability to think logically and analytically.

The main goals of teaching algebra are as follows:

• **Developing mathematical thinking:** Algebra helps students develop mathematical thinking. Algebraic problems require logical and systematic thinking, which ensures the intellectual development of students.

• **Application to everyday life:** Studying algebra not only provides students with academic knowledge, but also teaches them to apply this knowledge in practice. For example, algebraic calculations are widely used in economics, technology, and engineering.

• **Creating a foundation for learning new knowledge**: By teaching algebra, students acquire the necessary basic knowledge to later move on to geometry, functions, statistics, and other mathematical sections.

• **Developing problem-solving skills:** Another important goal of teaching algebra is to develop students' mathematical problem-solving skills. Solving algebraic equations teaches students to use a systematic approach.

• **Expanding thinking:** Algebra teaches students to think more broadly. They learn not only to solve mathematical equations, but also to solve various practical problems.

Conclusion

Teaching algebra is a key way to develop mathematical thinking and practical skills. The main goal of teaching algebra in secondary schools is to develop analytical and logical thinking, develop practical problem-solving skills, and teach students how to apply algebraic knowledge in everyday life. Algebra is important not only in mathematics, but also in all areas of modern life, such as technology, economics, and engineering. Therefore, the methodology and goals of teaching algebra serve not only to improve academic knowledge, but also to prepare students for practical life.

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