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METHODS OF TEACHING THE TOPIC OF THE SQUARE EQUATION IN 8TH GRADE ALGEBRA LESSONS AND BUILDING SKILLS IN STUDENTS

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Abstract
This article focuses on the simple ways to explain the "quadratic equations" to students in the 8th grade textbook, as well as the formation of students' skills on a new topic.

Keywords: mathematics, quadratic equation, discriminant, Viets' theorem, quadratic root, real numbers.

Introduction

"We consider healthy and harmonious youth to be the decisive force in the formation of New Uzbekistan. To this end, we will create a new system for realizing their potential in the field of knowledge, culture, arts and sports, as well as stimulating entrepreneurial activity.
I say again and again: the main pillar of the new Uzbekistan will be knowledge, education and upbringing! " [1]
As our President said, education is the pillar of our life. Educated youth will elevate Uzbekistan to new heights. They need to get knowledge, no matter what subject it is. However, since mathematics is related to all disciplines, I believe that this subject should be studied thoroughly. Editor's ChoiceAll It should be recognized that no science can stimulate the mental activity, thinking, rational thinking of a person like the science of mathematics. That is why it should be,mathematics is called the king of science. When the student is engaged in this subject, all attention is concentrated, thinking and thinking activity is activated.
Kvadrat tengalama—in mathematicsmultilingual, single-variable, and second-orderEquation.

Its general appearance is usually expressed as follows:
ax2 +bx+c=0
≠From ≠ /

- — the first (head) coefficient;
- is the second coefficient;
- — ozod had.

It is natural that the student will have difficulties in the process of learning the subject of mathematics. At the same time, the teacher has a high responsibility. Especially the upper class is divided into the subjects of mathematics "Algebra" and "Geometry". Also the topics

gradually become more complex. In particular, when we look at the subjects in Grade 8 algebra, it presents the topics divided into 5 chapters. The chapter titles are as follows:

1. Chapter I. Fractions and Their Operations;
2. Chapter II. Inequalities;
3. Chapter III. Quadratic equations;
4. Chapter IV. Data analysis;
5. V. Bob. Tacrorole.

It is worth noting that the coverage of the topic of Chapters I and II is not concepts that are entirely unfamiliar to the reader. They mastered initial knowledge of these topics even in the lower grades. From Chapter III onwards, the concept of the "quadratic equation" is given, which is truly a new bi to the readers. Let's analyze the concept of the quadratic equation and its methods of solving it one by one.

Equations of the form ax2+bx+c=0 are called quadratic equations. In this case, a,b,c is the coefficients of the square equation, and x is an unknown number. $3x^2$-x-2=0 the prime coefficient is "3", the second coefficient is "-1", the release is "-2".

Methods for solving square equations appeared in ancient Babylon about 4000 years ago. The methods of solving the equations given in the Babylonian materials were in the same way as the modern methods of solving.

There are several methods to solve a square equation:

1. method of finding roots by dividing by multiplication;
2. A method for solving the discriminant and quadratic equation by means of the formula for finding the roots;

   D=X$\sqrt{b^2-4ac}$, 1= $\frac{-b+\sqrt{b^2-4ac}}{2a}$, x2= $\frac{-b-\sqrt{b^2-4ac}}{2a}$
3. A method for solving an equation using Viet's theorem.

   x2+px+q=0, $x_1 \cdot x_2$=q, =-p.$x_1 + x_2$

The most important aspect in finding the roots by dividing the quadratic equation into multipliers is to divide the free factor by 2 suitable factors. If the student has a good ability to perform arithmetic operations on numbers, then finding the roots of the square equation by this method will not pose a problem for the student.

Now, by the method of multiplication, we find the following quadratic equations

Example 1. x^2We divide the equation -5x+4=0 into factors. In this case, let us divide the number "4" of the free had in our equation by such 2 factors that when we add the numbers that are formed, the number "-5" is formed, that is, the second coefficient. So we divide the number "4" into multiples: 4=14, 4=22, 4=-1(-4), 4=-2(-2) If we consider these equations, then 4=-1(-4) is the sum of these numbers equal to -5, so it follows that·····

x^2-5x+4=0

(x-1)(x-4)=0

x_1=1, =4x_2

Example 2. x^2+x-6=0 means that the release in the equation is "-6". We must find two such factors that the product of them must be "-6" and the sum of "1".

(x-2)(x+3)=0

$x_1=2$, $=-3x_2$

Similarly, we consider the following equations by multiples.

1. $+6x^2x-7=0$ 2. $x^2+4x-12=0$ 3. $x^2+2x-15=0$

$(x-7)(x+1)=0$ $(x+6)(x-2)=0$ $(x+5)(x-3)=0$

$x_1=-5$, $=3$ $=-6$, $=2$ $=7$, $=-1$ x_2 x_1x_2 x_1x_2

We can also work the equation through the formula for finding the roots of the quadratic equation. In this we use the following formula.

$$\mathbf{D=X\sqrt{b^2-4ac}}\ , \quad \mathbf{1=}\frac{-b+\sqrt{b^2-4ac}}{2a}\mathbf{,\ x2=}\ \frac{-b-\sqrt{b^2-4ac}}{2a}$$

We will explore three cases in finding the roots of the equation by this formula.

1. There are 2 roots of the equation when ax2+bx+c=0, D>0.
2. The equation has no roots when ax2+bx+c=0, D<0.
3. The equation has 1 root when ax2+bx+c=0, D=0.

Conclusion

To sum up,there are basically 3 ways to solve square equations. We have discussed these methods above, in order for the student to master this topic well, he needs to solve more examples and problems related to this topic and complete the assignments assigned by the teacher on time. Of course, the teacher must also conduct the lesson perfectly, that is, in a state that the students understand.

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