

# Example of essay on algebra projects

[Life](#)



## **Project 1**

### Introduction

The history of quadratic equations goes back to early 1100 AD when Arabic and Hindu mathematicians were trying to explore sciences and understand the processes around the world. In the course of history many mathematicians were trying to invent a formula that could solve quadratic equations. Early Hindu mathematician Baskhara was the first who recognized, that every positive number has two square roots. Nowadays the quadratic equation formula is used in algebra, physics, engineering, calculus and other sciences that need calculations.

## **Project**

This task required me to use an Indian method of solving quadratic equations. In this method we need to move the constant term to the other side and multiply both sides by 4. Four is a number that will give  $2x$  when taking a square root from the left side. Then, we add another constant to both sides so that the left side has a sum squared. The final step is when we solve for  $x$  two equations, with a negative and positive square roots. I do not use this kind of equations in everyday life, but knowing them develops thinking process and logics.

## **Project 2**

### Introduction

In this project we are going to review prime and composite numbers. A prime number is a natural number that is greater than 1 and has only two positive divisors: one and itself. The fundamental theory of arithmetic is based upon

the knowledge about prime numbers. Carl F. Gauss ( Disquisitiones Arithmeticae, 1801) also supported the statement, that knowing how to distinguish prime numbers from composite is the most important in arithmetics.

## Project

Let's select such numbers: zero, seven, nineteen, negative twenty-four and sixteen.

$$0 : 0^2 - 0 + 41 = 41 \text{ (a prime number)}$$

$$7: 49 - 7 + 41 = 83 \text{ (a prime number)}$$

$$19: 361 - 19 + 41 = 383 \text{ (a prime number)}$$

$$- 24 = 576 + 24 + 41 = 641 \text{ (a prime number)}$$

$$16 = 256 - 16 + 41 = 281 \text{ (a prime number)}$$

This formula is applicable with all the numbers that we have selected.

The only number that would be 41 itself, 41 squared is a composite number because it can be divided by 1, 41 and 1681.

## Conclusion

In this project we have reviewed a formula that would turn any number into a prime one. Prime and composite numbers are very applicable in modern life. There many ways to check whether the number is composite, but usually it is faster just to divide number by 2, 3, 5 and 7. These numbers are prime and basic for all other numbers, e. g.  $81 = 3333$  etc. In everyday life knowing these numbers helps us in basic calculations, such as in shopping and division of objects.

## **References**

The History Behind The Quadratic Formula (13 October 2004), retrieved from <http://h2g2.com/dna/h2g2/A2982567>

The Largest Known Primes--A Summary, retrieved from <http://primes.utm.edu/largest.html>