



## SOLVING PROBLEMS IN ARITHMETICAL METHODS

Allayarova Umida

3rd year student of the Faculty of Physics and Mathematics of Nukus  
State Pedagogical Institute named after Ajinyoz  
<https://doi.org/10.5281/zenodo.12091137>

**ABSTRACT.** This article will help students overcome the problems they face when solving text problems in mathematics lessons in the modern educational process. And the ease of solving problems in this way is an important basis for developing students' problem-solving skills.

**Keywords:** arithmetic, quantity, text, task, flow, distance, time, speed, movement, scheme, mathematics, second, formula, object, solution, part, practical, answer, path, theoretical.

**АННОТАЦИЯ.** Данная статья поможет учащимся преодолеть проблемы, с которыми они сталкиваются при решении текстовых задач на уроках математики в современном образовательном процессе. А простота решения задач таким способом является важной основой для развития у учащихся навыков решения задач.

**Ключевые слова:** арифметика, количество, текст, задача, поток, расстояние, время, скорость, движение, схема, математика, секунда, формула, объект, решение, часть, практический, ответ, путь, теоретический.

Arithmetical methods, also known as arithmetic techniques, are essential in solving mathematical problems involving numbers. This includes addition, subtraction, multiplication, and division. However, sometimes students may face challenges when trying to solve problems using these methods. In this essay, we will discuss various strategies for effectively solving problems in arithmetical methods. One common problem students encounter is making mistakes when performing calculations. To avoid errors, it is important to double-check your work. This means taking the time to review your calculations and make sure you haven't made any mistakes. Additionally, it can be helpful to break down complex problems into smaller, more manageable steps. Another issue students may face is difficulty understanding the problem. To overcome this, it is important to read the problem carefully and identify the key information. You can underline or highlight important details to help you focus on what needs to be solved. If you are still unsure, try rephrasing the problem in your own words to gain a better understanding.

One effective strategy for solving problems in arithmetical methods is using visual aids. This can include drawing diagrams, using number lines, or creating tables to help organize information. Visual aids can make it easier to see patterns and relationships between numbers, making it easier to solve the problem. Additionally, it is important to practice regularly to improve your arithmetical skills. By doing practice problems, you can become more familiar with various techniques and develop a better understanding of how to approach different types of problems. Practice also helps build confidence in your abilities to solve problems accurately and efficiently. It is also important to seek help when needed. If you are struggling to solve a problem, don't be afraid to ask your teacher or classmates for

guidance. Sometimes, a fresh perspective can help you see the problem in a different light and lead to a solution. Furthermore, it can be beneficial to use real-life examples to make arithmetical methods more relatable. By applying these techniques to everyday situations, such as budgeting or shopping, you can see how math is used in practical ways and develop a better understanding of its importance.

Another important aspect of solving problems in arithmetical methods is being organized. Keep track of your work by writing down each step of the problem-solving process. This can help you stay focused and prevent errors. Additionally, organizing your work can make it easier to review your process and identify any mistakes. When solving problems in arithmetical methods, it is important to be patient and persistent. Some problems may be more challenging than others, but with practice and determination, you can overcome obstacles and improve your skills. Remember to stay positive and believe in your ability to solve problems effectively.

Arithmetical methods are foundational to mathematics and are used in a wide range of problem-solving scenarios. From basic addition and subtraction to complex algebraic equations, arithmetical methods form the building blocks of quantitative reasoning. However, solving problems using arithmetical methods can sometimes be challenging, requiring a deep understanding of mathematical concepts and the ability to apply various techniques to arrive at a solution. In this essay, we will explore the different strategies and approaches that can be employed to solve problems in arithmetical methods effectively. One common problem-solving strategy in arithmetic is the use of algorithms. Algorithms are step-by-step procedures that can be used to solve mathematical problems systematically. For example, the long division algorithm is commonly used to divide one number by another. By following the steps of the algorithm, one can efficiently arrive at the quotient of the division problem. Another important aspect of solving problems in arithmetical methods is understanding the properties of numbers. For instance, knowing the properties of even and odd numbers can help simplify calculations and lead to quicker solutions. Similarly, understanding the properties of prime and composite numbers can be useful when factoring large numbers.

In many problem-solving scenarios, it is also essential to be able to translate verbal or written problems into mathematical equations. This requires the ability to identify key information in the problem statement and use it to set up an appropriate mathematical model. For example, in a problem involving two unknown quantities, setting up a system of equations can help find the values of both variables. When dealing with complex calculations or equations, it is often helpful to break the problem into smaller, more manageable parts. This strategy, known as decomposition or breaking down, can simplify the problem-solving process and reduce the risk of errors. By dividing a problem into smaller steps, one can focus on each part individually and gradually build towards a solution. Graphical representations can also be a powerful tool in solving arithmetic problems. Graphs can help visualize relationships between different variables and provide insight into the behavior of mathematical functions. For example, plotting points on a coordinate plane can help identify patterns and trends in a data set, leading to a deeper understanding of the problem at hand.

Furthermore, technology can play a significant role in solving problems in arithmetical methods. Calculators, spreadsheets, and mathematical software can automate calculations, check for errors, and provide visualizations of mathematical concepts. By leveraging

technological tools, mathematicians can focus on higher-level problem-solving strategies and streamline the problem-solving process. In some cases, problem-solving in arithmetical methods may require ingenuity and creativity. Thinking outside the box and exploring alternative approaches can lead to novel solutions to complex problems. Moreover, collaborating with colleagues or seeking help from mentors can provide fresh perspectives and new insights that can aid in problem-solving. It is crucial to remember that practice plays a crucial role in developing proficiency in arithmetical methods. By working on a variety of problems, both simple and complex, one can hone their skills, improve their mathematical intuition, and become more adept at solving problems efficiently. Regular practice also helps reinforce mathematical concepts and build confidence in tackling new challenges.

In conclusion, solving problems in arithmetical methods requires a combination of mathematical knowledge, problem-solving strategies, and critical thinking skills. By leveraging algorithms, understanding number properties, translating problems into equations, decomposing complex problems, using graphical representations, utilizing technology, thinking creatively, practicing regularly, and seeking help when needed, mathematicians can effectively tackle a wide range of arithmetical problems. Ultimately, the ability to solve problems in arithmetical methods is a valuable skill that can be applied in various fields and can lead to deeper insights into the nature of mathematics. Solving problems in arithmetical methods requires a combination of skills, strategies, and practice. By being attentive, using visual aids, practicing regularly, seeking help when needed, using real-life examples, staying organized, being patient, and persistent, you can improve your arithmetical abilities and become a more confident problem solver. With dedication and effort, you can overcome challenges and succeed in mastering arithmetical methods.

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