



From the methodology of using non-standard tests in the design of practical training on number theory

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ABSTRACT

This article discusses the development of numbers, the extension of number systems, and the concepts underlying the notions of integers, rational and complex numbers. Recommendations are given for the effective implementation of all numerical extensions and their characteristics, using non-standard tests.

Keywords:

numbers, division signs, general and specific division of numbers, non-standard tests.

Introduction: Today's teacher is a creative person who works tirelessly, is broad-minded in all aspects, can effectively use advanced pedagogical and information technologies, and becomes a possessor of high qualities that deeply penetrate the hearts of young people. . From this point of view, the problem of improving the teacher's pedagogical skills is the need of the hour. This determines that it is an urgent task of today to work more actively with the young generation, to create in them a worldview and moral principles that meet the requirements of the current society.

The purpose of writing this article is to interest students in lesson processes and to organize the process of independent learning, in particular, division signs, general numbers in teaching the subject of division and multiplication consists of developing lesson plans using innovative educational technologies and recommending the appropriate teaching methodology, in particular, recommending non-standard tests.

The following tasks are performed when designing a practical exercise on the subject of division symbols, common divisor and multiple of numbers.

Taking the topic of division signs, the common divisor and multiplier of numbers as the "biggest topic" as a whole, it is divided into "big", "medium" and "small" concepts based on the size and content of the materials presented in it. then the time allotted to write their contents is determined.

I will give an example of non-standard test tasks used to control and evaluate the level of achievement of the educational goal of knowledge. When monitoring the achievement of the educational goal of knowledge, it is appropriate to determine the degree of mastering of information and information on a specific topic. For this purpose, the student must identify the objects on the subject, give them a description, process the data, express his opinion, explain the essence of a certain process, object or event, distinguish the specific

features of this process, object or event. will have to show. These ideas cannot be implemented with a standard educational and test task, it is recommended to use the following non-standard tests with pictures and multiple answers to determine the level of achievement of the educational goal of knowledge.

These test tasks allow to control and evaluate not only the acquired knowledge of the students, but also the ability to identify the familiar and unique features of the object and its parts.

1. Determine which number is divisible by which number and match

1) 2 ga 2) 5 ga ; 3) 10 ga 4) 9 ga 5) 100 ga

134858	9999981	566700	1906780	5654445
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Answer:

134858	9999981	566700	1906780	5654445
1	4	5	3	2

2. $\forall n \in N$ for $n(n+1)(n+2)$ expression is divisible by any natural number without a remainder?

a) 6 b) 7 c) 8 d) 9 e) 4

Javob: a) 6

3. Match the explanations and definitions.

1	<i>Complicated</i>	A	<i>A natural number with only two natural divisors</i>
2	<i>Tub</i>	B	<i>A natural number with more than two natural divisors</i>
3	<i>Not defined</i>	C	<i>The smallest prime number</i>
4	2	D	<i>The largest prime number</i>
J:	1-	2 -	3 - 4 -

Answer: 1-B 2 -A 3 - D 4 - C

4. Match scientists by name and field of activity.

Nº	Scientists	Nº	Field of activity
1	Evklid	A	To be left behind
2	Diофант	B	Multiplicative function
3	Пифагор	C	Right triangle
4	Эйлер	D	An indeterminate equation

Answer 1 - A; 2 - D; 3 - C; 4 - B;

5. Place a number in the empty cell so that the resulting number in 3470 is divisible by 45 without a remainder.

a) 4 b) 0 c) 5 d) 6 e) 3 Javob: a)

6. Write the concepts of residuals and comparisons on the right side of the table.

1) division 3) discount 5) had 7) module
2) residual 4) divider 6) divider 8) class

Mathematical concepts	Answer numbers
To be left behind	
comparisons	

Answer:

Mathematical concepts	Answer numbers
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To be left behind	1,2,4,6
comparisons	3,5,7,8

7. Put the correct answer in the box. Two-digit natural numbers that are multiples of 6

a) 15 b) 13 c) 11 d) 12 e) 10

Answer: a)15

8. Classify the numbers given below.

1) 17 2) 23 3) 25 4) -2 5) -9 6) 0 7) 63 8) -72

Mathematical concept	Answer numbers
A prime number	
A complex number	
A natural number	
An integer	

Answer:

Mathematical concept	Answer numbers
A prime number	1,2
A complex number	3,7
Natural ending	1,2,3,7
all last	1-8

9. Which of the following statements are correct?

A. The balance is only positive.
 B. The natural divisor of a prime number is more than 2.
 C. Any positive rational number represents the length of a segment.
 D. For a natural number to be divided by 9, it is necessary and sufficient to divide this number by 3.
 E. The relation "a immediately follows" defined on the set of natural numbers is a one-place algebraic operation.
 F. There are 4 main ways to prove theorems.
 G. 5 is a prime and complex number.

Answer: _____

Answer: A, C, E, F.

10. When determining whether the number 1321 is prime or complex, at what last prime number do we stop?

a) 31 b) 37 c) 39 d) 41 e) 43

Answer: a) 31

11. If any of the following statements are true, put the words "yes" and "no" if they are false.

A. The fractional part of 2.4 is 0.4.
 B. The whole part of 2.4 is equal to 0.4.
 C. The set of all even natural numbers is a finite set.
 D. The fractional part of 2.4 is equal to 2
 E. The whole part of 2.4 is equal to 2

A	B	C	D	E

Answer:

A	B	C	D	E
ha	yo'q	yo'q	yo`q	ha

12. What is the result of dividing 123...3435 by 25, the result of writing 35 consecutive natural numbers?

a) 10 b) 11 c) 12 d) 9 e) 8

Answer: a) 10
 13. 23! in the canonical expansion of prime multipliers, the power of 2 is equal to , the power of 3 is equal to , and the power of 5 is equal to ?

Answer: 19, 9, 4

Khuosa: The use of non-standard test tasks in monitoring and evaluating the level of achievement of educational goals of students in the educational process ensures the accuracy, comprehensiveness of control and the effectiveness of knowledge acquisition.

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