INDIVIDUAL AND DIFFERENTIATED APPROACH TO THE FORMATION OF PROFESSIONAL COMPETENCIES IN STUDENTS

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Abstract. It is known that a lesson in school is the main form of teaching. The main goals of teaching mathematics: educational goals, educational goals, practical goals, developmental goals are all mainly implemented in the lesson. Since the teacher works with all students during the lesson, he works according to the student with average knowledge. Such an approach to all students can bore good readers, and on the contrary, it can cause certain difficulties for those who master less. That's why the teacher has the task of taking into account the individual characteristics of students, their knowledge, and this article can be a solution to this task.

Keywords: competence, individual, differentiated, method of approach, in teaching.

It requires an individual approach to each student, taking into account the students' inclination, ability, interest, memory and thinking characteristics, that is, the use of an individual and differentiated approach to students during the lesson. It is not appropriate to teach students the same without taking into account their interests and abilities. In this case, the more capable students lose interest in studying, and the less knowledgeable students face serious difficulties in understanding and mastering the educational material. In this case, the quality and effectiveness of the lesson may decrease.[1]

Differentiated approach means such a system of managing students' independent educational activities that takes into account the individual characteristics of students as well as the main characteristics of certain groups. Differentiated teaching is understood as an educational process that involves managing students' cognitive activities in a certain system. An individual approach to teaching is understood as a system of managing students' cognitive activity, taking into account the individual psychological characteristics of each student. Accordingly, the organization of training is called individualized training [5]. In practice (educational process), various forms of differentiation of mathematics teaching are emerging. For example: the use of independent work options aimed at students with different levels of training and independence is widely used.[10]

Depending on the level of preparation of students in the same auditorium, control works and control tests in methodical manuals and didactic materials are created in different variants.

There are certain difficulties in creating options in a differentiated approach. Usually, such options are divided into 3-4 levels, but the student must decide which level option to choose. The main principle of the classification is not the continuous simplification of the educational material, but the teacher should provide differentiated support to the students.[2]

To apply a differentiated approach in educational practice, "hint cards" are used, one of which gives the solution to the problem, and the other gives a graph of the problem as a reference. In another case, a solution to a problem similar to the problem given as a template is given.[3] As a result, all students solve the same problem, but the guidance and advice given to them is different.

More difficult tasks are offered for stronger students in the audience. Such tasks must be included in the textbooks or prepared by the teacher in advance.[2]

At this point, we found it necessary to comment on several of their methodological and psychological aspects. When students were given examples, problems and tasks from the test options, we witnessed that they were approached with serious interest.

It is necessary to give instructions and methodical support recommendations in order to correctly direct students to solve such examples and problems independently. One of the ways to increase the effectiveness of teaching mathematics is to implement an individualized approach.[1] For example, students can be offered problems of different complexity in order to implement a differentiated approach. We have shown the solution to the problem.

Example 1

$$y = 2^x + \left(\frac{1}{2}\right)^x$$ draw the graph of the function below

> plot(2^x+(1/2)^x,x=-9..9,y=-9..9);
select the command and press Enter:
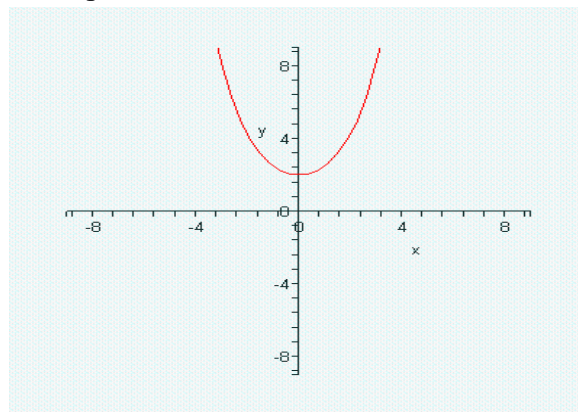
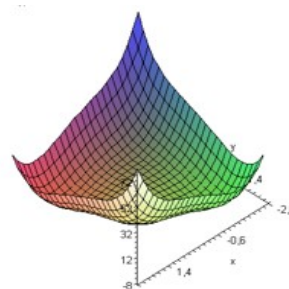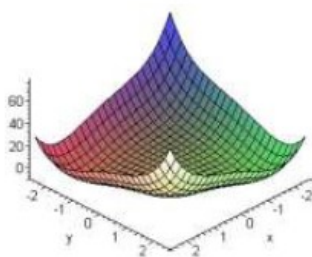$$y = 2^x + \left(\frac{1}{2}\right)^x$$ function graph

Example 2. Graph the following function
$$f(x, y) = x^4 + y^4 - 2x^2 - 2y^2 + 4xy$$

Solution: We make the graph of this function in the Maple program. We enter the function in the Maple program.
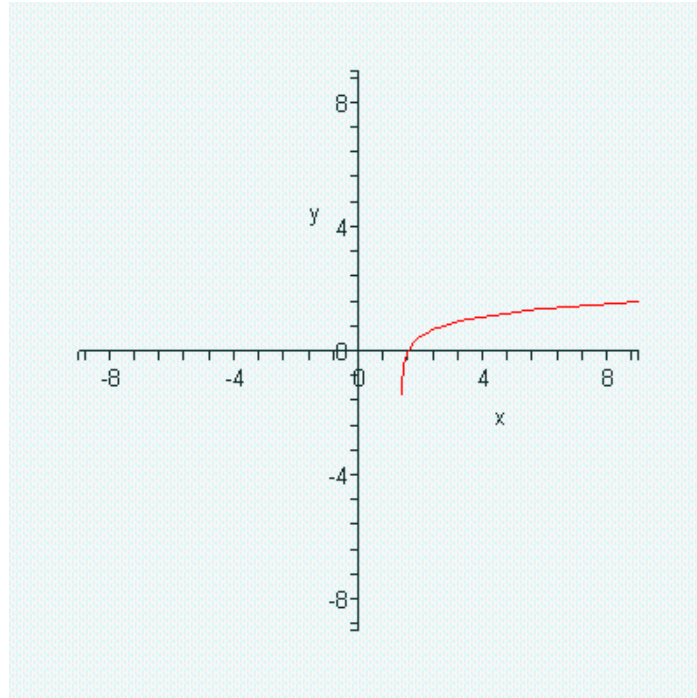> $f:=x^4+y^4-2*x^2-2*y^2+4*x*y$

Using the command below to draw a graph of a function in the Maple program is done.
>$plot3d(f(x,y), x=2.5..2.5, y=2.5..2.5, axes=frame)$ Write the command and press the enter button, and the following graph will be created.

Example 3

$y = \lg(5x - 7)$ draw the graph of the function below

> plot(log[10](5*x-7),x=-9..9,y=-9..9); select the command and press Enter:
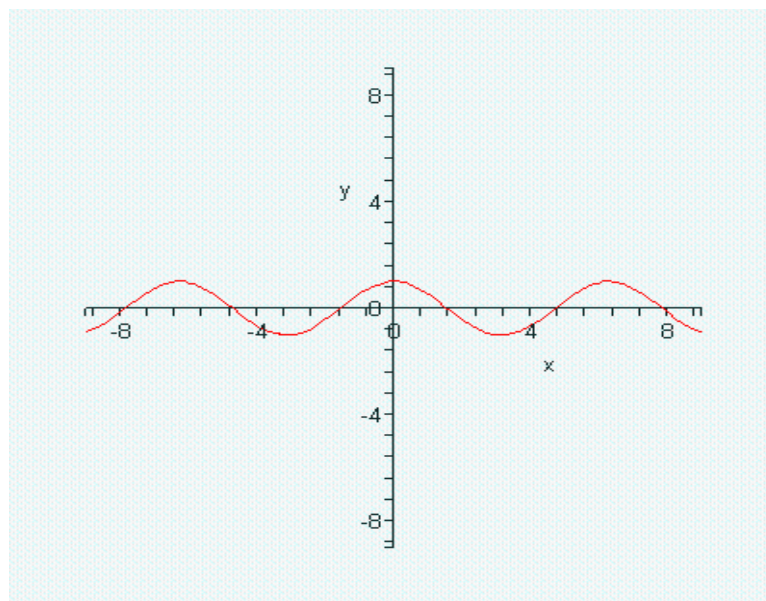

$\log(5x - 7)$ function graph.

Example 4

$y = \sin\left(x + \dfrac{\pi}{2}\right)$ draw the graph of the function below

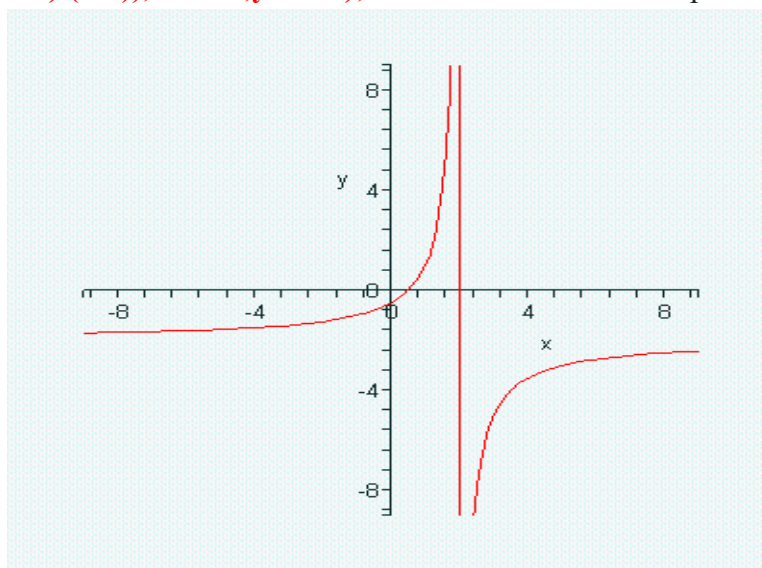**> plot(sin(x+Pi/2),x=-9..9,y=-9..9);** select the command and press Enter:

$$y = \sin\left(x + \frac{\pi}{2}\right).$$

Example 5

$y = \dfrac{1-2x}{x-2}$ draw the graph of the function below

> plot(((1-2*x)/(x-2)),x=-9..9,y=-9..9); select the command and press Enter:

$y = \dfrac{1-2x}{x-2}$ function graph.

So, in some cases (but not always) it is possible to find the value of some unknowns from such systems. Solving problems of the above complexity in extracurricular activities is interesting not only for physicists, but also from the point of view of mathematics. methods of individual approach to students are presented by teachers.
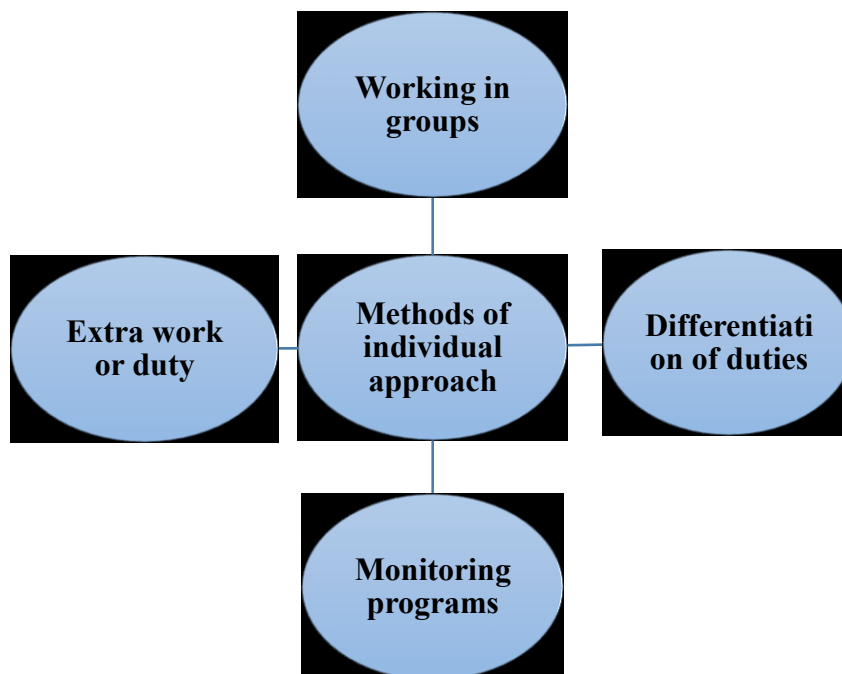
Methodology of individual approach.

Working in groups can be divided into the following parts: Working in pairs, two students with the same or different mastery can be formed into pairs. One should not be surprised by the friendship that arises in this, rather, it is necessary to pay attention to the relationship between

children with different abilities in the group. Students of the same or different levels are selected in small groups, each group is given a different part of the task and directed to work together. The essence of the method of differentiating tasks is based on simple to complex, and consists in developing different tasks for students with different mastery. For example, two types of questions can be created on the same topic. While all students work on the first type of questions, gifted students should also work on the second type of questions. Asking questions by name of students is also an effective way to attract the attention of the participants to the lesson and it is better to ask more difficult questions from stronger students and easier questions from others.

Conclusion. The general pedagogical and general methodological aspects of the individual and differentiated approach in mathematics lessons were thoroughly studied and the methodology of their implementation was developed, and it was theoretically and methodologically justified that the strengthening of attention to the organization of student activities, one of the ways to improve the quality and efficiency of mathematics teaching.

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