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THE PECULIARITIES OF CREATIVE APPROACH TO SOLVING PHYSICAL TASKS

Physics is a very difficult and at the same time interesting subject. The majority of students and pupils support this thought. The discrepancy between perception of physics as a complex study subject and rejection of the process of physics study as an exciting study probably is the main reason the problems, which appear during studying of physics. The main difficulties at students and pupils arise during solving tasks. The qualitative solution of task requires complex skills of perception of physical reality, which combines into a complete picture the empirical information about the physical processes and phenomena of their theoretical and analytical models.

There have been written a great number of manuals, books, research papers, topics which are devoted to the problem of solving tasks in physics. The questions of development of methods of solving tasks in physics course at different times are considered in works of L. Antonov, B. Belikov, V. Volkenshtein, L. Dedenko, Matveev, I. Irodov, S. Pavlov, I. Savelev, T. Trofimov, E. Firhan, A. Chertov. In works of these scientistsi is determined all the main approaches of finding solutions of tasks, written detail algorithms using which one can learn easily to solve any tasks in physics. However, a great number of students and pupils do not possess the ability to solve physical tasks at the appropriate level. So what's the secret? How can you master the art of solving tasks? This question can not be answered in one sentence, a short recipe, or even the whole article. To begin the searting the answer it is better with analysis of main approachers to solving tasks in physics.

The optimal choice and rational using of the certain approaches to solving physical tasks largely determines the success of the process of solving the task. It is necessary to consider the problem of correlation of formal and algorithmic and creative approaches to solving tasks in physics.

The majority of students and pupils quite confident solve simple taskss that require only direct setting in a certain calculation formula known numerical meanings ofdefinite physical quantities. But more complex examples in which it is necessary to derive the formula from other expressions or laws, or analytical correlation from other sections of physics cause great difficulties. For these cases there have been worked out standard approaches and algorithms, which by means of gradual using allow getting the right answer. Of course, there are such tasks, for solving of which the standard means and methods generally unsuitable. These tasks require extraordinary creativity, based on a deep understanding of the systemic nature of the physical processes and phenomena.