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IMPORTANCE OF PROBLEM SOLVING IN PHYSICS LESSONS

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ABSTRACT

Issues solution-scientific knowledge and concepts system take over of means one counting. Knowledge and practical in character study and qualifications in possession issues solve of the process role very is big.

Keywords: problem, math principle, index, physics laws, sizes.

INTRODUCTION

Of the concept of "issue". meaning very is diverse. Of these some of them of the following consists of:

- to be achieved need was the goal;
- known knowledge and thoughts based on to solve Demand who does question.
- of teaching and knowledge and practical studies check methods one;

Issues practical and study issues separated. Study issues study of activity basis organize does. Practical issues done when increased and solving the problem process participates because it is direct result, that is the product being is counted.

Study in the process As a physical matter, usually not so much big didn't happen something concrete to the problem it is said. Such issues makes sense thought accounting, math actions to perform and of physics from the laws as well from styles experiment using transfer based on is solved.

2. " Problem when it is said to " solve ", something concrete issue to solve analysis to do and of the solution main stages separate in the process some methods work exit is understood.

3. Problem solving of the process stages from the following consists of:

1. Matter condition reading.
2. of the problem physicist mo h ability determination and matter provided q is mixing event or the body status or take imagination to do in matter content analysis to do.
3. Beyond the sky head inside q mixed matter content even more to open for additional drawing, scheme or schematic pictures drawing.
4. Matter condition writing.
5. Given to the matter belongs to physicist concepts and laws determination.
6. Given and wanted physicist sizes connecting laws determination and their formulas writing.
7. Equations system make up and him looking for physicist to size relatively common appeared solution, i.e. "working formula" cause release In this equations system to solve from entering first mathematician to the principle full compliance to do, that is vector from Eqs scalar to Eqs transition and unknowns the number with equations the number to compare need.
8. Physics of sizes values units transfer.

9. Under the condition of the matter physicist of sizes values units with together of the matter common in the form of to the solution to put
10. Physics of sizes units or dimensions solution of the problem through correctness check.
11. Looking for physicist size calculation. Calculations acceleration in order to logarithmic ruler and from calculators use.
12. Received the answer analysis to do, in the condition of the matter of simplifications to the answer effect evaluation of the answer reliable and that it is real determination.
13. Given issue of solving another possible was methods to look and of them the most rational method choose.

Problem solving in the process students xar one stage the following perform need:

First stage the condition of the student issue in reading of the matter content superficial understand takes and in itself physicist event about according to imagination fruit does.

Second and the third stage of the matter content in full imagination to do for issue drawing or to the scheme looking, again Slower by reading comes out.

The fourth stage issue successful solve in the case of the issue for given known physicist sizes determines. These sizes to write during the condition of the student issue the third times reads, in this word and expressions or talk content with given physicist sizes determines. Such sizes physicist constants table information and something of the event conditions to be can of the problem condition short, line or superior in the form of to write can. Condition of matter briefly when written all given physicist sizes their letter signs through 0 numeric values while belongs to units with together is written. One physicist of size one how many value participating if, letter sign under index is entered.

Condition of the issue preferably to write order paper on the left side of the page under the condition of the issue directly to the left of the given sizes, then while table data is written, line draw under it of the matter question as above shortening is written. If you solve the problem process during another q additional data necessary being if they are of the column to continue , that is from the question after writing can, from the line above records densification recommendation not done. Column by doing condition of the written issue vectorial line with separately, physics of sizes units respectively to SI units leaving room for transfer, ung to the side to the matter belongs to picture is drawn. Condition of the issue such to write planning compact and rational is counted.

The fifth and sixth stage student in the matter being looked at event descriptive physicist the law of the matter as the content determines, is sought physicist size attended the law or formula writing need.

At that time this subject to the expression not given another in the case of an expression problem not given another sizes for next laws to write Demand will be done. In a row written of laws the most the last one is conditional physicist sizes through written to be need So so, formulas with written physicist of laws this system 0 unknown equations system organize does. Created in Eqs physicist sizes vector sizes if so, at that time equations scalar apparently to bring it is necessary Of this for coordinates style is used, ie equations vector in the x and y axes of magnitudes projections for is written.

Seventh stage above fruit was equations system but looking for physicist to size relatively is solved. In this mathematician in terms of rational was arithmetic, algebraic, geometric, vector

and graph of methods is used. Harvest " working formula" problem solving of the process result in it looking for physicist size is conditional known sizes through is expressed .

The student to solve the problem entered initial the content of the issue at the time physicist the basics to think need. That's why for student " worker formula harvest from doing then, the eighth in the condition of the issue at the stage given physicist of sizes units to SI units transfer with engage in need. These records are a condition of the matter of the column to continue vertical line from left to the place if written, of records aesthetic apparently defect not enough The ninth in the condition of the issue at the stage given physicist sizes " worker to the formula put at the time their numerical values and units separate - separate write, all units one square kavs into get recommendation will be done. Such to write and the solution of the problem correctness units through to check possibility will give.

If "worker to the formula put at the time their numerical values and units separately separately write, all units one square bracket into get recommendation will be done. Such to write and the solution of the problem correctness units through to check possibility will give. If to the formula in it each one of size measurement if it is written, it is being searched for of size size fruit to be need. Then subtract the numerical value of the answer to count get in need.

Obtained in Step 2 of the answer value of the matter provided suitable coming will be checked. Numbers excess with or with less well done calculations perform some in scores of the matter to the answer sharp effect reach can. That's why for student received of the answer reliable and that it is real trust harvest to do need.

From him except also pay attention to the following to give need:

- square of Eq the solution has been both root everyone time of the matter condition does not satisfy can:
- graph analysis in realistic ways curve of the line limited show can.
- Various stage of issues solution When writing, the student solves the problem on the way own thought and comments briefly statement coming recommendation will be done. Such from the solution of the writing problem to the program according to whole in appearance to be or xar one done briefly explanations to give through to be can. That's why for physics of the teacher task students solutions in detail written from physics some issues collection with by introducing from going consists of With this while of students independent work skills forming goes.

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