

AP Physics

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Physics Problem Solving Method

The following is a useful method to employ when solving physics problems. The answer to a physics problem, although valuable, is not the most important part of the problem. This method focuses on careful and thoughtful analysis, application and evaluation. The three phases of this problem solving method are rooted in a systematic and deliberate approach.

! Doing physics is more than just plug-and-chug !

Phase I – Identify and Define

1. Identify and define the problem
2. Understand the situation and problem parameters
3. Identify the physics principles that apply to the problem

Phase II – Strategize and Solve

4. Develop an approach or strategy to solve the problem
5. Construct a solution that incorporates relevant equations – This may involve the use of simultaneous or systems of equations
6. Work out the solution to obtain an answer – This may involve substitution of equivalent expressions

Phase III - Evaluate

7. Evaluate the answer for meaningfulness
 - Does the answer make sense in terms of the problem situation and parameters?
 - Does the answer make sense in terms of physical laws?
 - Is the answer expressed using consistent units?
 - Are you answering the question that was asked?