

10 Commandments for Physics Problem Solving

1. *Read the problem carefully* and make sure you understand the question being asked.
2. *Draw a figure* representing the problem.
3. *Identify all known quantities* and assign appropriate variables to them.
4. *Identify unknown quantities* and assign appropriate variables to these.
5. Make sure that all *units* are consistent and perform any necessary conversions.
6. *Choose the appropriate physics principles* and corresponding *equation(s)* that apply to the problem.
7. *Solve the equations algebraically* such that the unknown (desired) variable is on the left-hand side of the equation, alone, and all other variables on the right are known.
8. *Plug in numbers* for the known variables with units and calculate the value and units of the unknown.
9. Make sure the value and units you found *make sense*.
10. If you get stuck, put it aside and look at it again later. *Get extra help if you need it!*