

- First and foremost, it is your responsibility for your handwriting to be legible. I cannot grade what I cannot read.
- Do not forget the units. One cannot overemphasize this.
- Write in the reading order, i.e. from left to right and top to bottom. Use one equation in a line to avoid cluster and keep your equations left-aligned. Avoid *patchworks* and *pop-up clouds* that you think you should add later to further illuminate or emphasize your solution proposal.
- Start by drawing the configuration given to you. This will immediately give the impression of whether you will solve the same problem as I do. Show and label all the physical quantities; masses, lengths, the gravitational acceleration, all the vectors you will need, angles, and perhaps most importantly the 2D or 3D coordinate axes, the equilibrium points, and the datum for the gravitational potential energy to name a few. If you are given, say, some lengths and speeds, then make up some letters for them so that there are no numbers on your figures. List the variables together with their numerical values right after the figures.
- If you are asked to plot a quantity as a function of a variable, indicate the axis labels with correct units. Write just above the plot its title.
- State what equation (the Newton 2nd Law, conservation of energy, equations of motion with constant acceleration, etc.) or definition (kinetic energy, angular momentum, etc.) you are using in its canonical form before inserting your variables into the said expressions.
- Expand the terms in your equations step by step in each line and show all the steps. Do not perform cancellations and simplifications in your mind. This will help you and me catch algebraic mistakes, if any.
- Avoid at all costs inserting numerical values at any intermediate step because (1) that's what I am going to do and hence I will not numerically know the intermediate values and (2) you will most probably obtain incorrect results at the last couple of significant figures for the next results. If a part of a problem specifically tells you to evaluate a certain quantity numerically, then of course you should do it but later on, you should keep doing the symbolic work until the end.
- Your end result should have as many significant figures as the number with the fewest given in the problem statement. However, as in our textbook, some problems may tell you to keep a certain number of significant figures. Beware of it because I will allow a difference of ± 5 in the last significant figure between your numerical end results and mine.
- Keep a consistent notation throughout your solution proposal. One way to do so is to imagine you are writing a piece of code. You should imagine I am the compiler and hence, if you supply a different variable than expected, I will most certainly miss it and may not be able to keep further track of your calculations.
- Put a box around your final answer. If the problem asks you to find, say, a distance, then draw a box around both the symbolic expression for it in terms of other quantities (so that I can compare it to mine in its closed form) and the numerical value you obtain after inserting the input parameters. Box gives the feeling of conclusion, so don't overuse it.
- Quoting Prof. Gabrielse, your solution proposal should contain just enough write-up. You wouldn't want to suffocate the reader with lots of details like I just did in this document.