

ME 303 Problem Solving Format

Adhere to the following guidelines when solving homework, quiz or exam problems. These guidelines may be updated as the course progresses. If they are, you will be notified by e-mail that a new version of the guidelines has been uploaded on the course web page:

<http://www.ces.clemson.edu/~jsaylor/teaching.html>

1. State what is known, what you are solving for, and what assumptions you make.
2. Show all intermediate steps in solving problems.
3. Include a diagram of the physical setup (if there is one).
4. Identify the relevant system boundaries. Draw a control volume if this is a control volume problem. If the problem is a closed system problem, draw the boundary to the system.
5. Write neatly. If I, or the grader, have trouble reading your work, you will receive a grade of zero on that problem.
6. Make the difference between UPPERCASE and lowercase variables **very clear**. Make the difference between a variable and its_{subscript} very clear.
7. Include units on all numbers that have a unit (i.e. for everything but dimensionless quantities, like quality). There is no such thing as an energy of 24.3. There is such a thing as an energy of 24.3 Joules (or kJ, or Btu...).
8. No magic steps! One line of work followed by the correct answer invites the wrath of the grader. The same is true for work which obviously leads to an incorrect answer, but magically produces a correct answer. Write down the answer which results from the work that you did.
9. Solve integrals and derivatives by hand and show the intermediate steps in this process. Do not use a calculator to solve integrals or to obtain derivatives, unless you are instructed to do otherwise.