

SOME ADVICE FOR WRITING SOLUTIONS TO WRITTEN ASSIGNMENTS

One of the purposes of the written assignments is to learn how to communicate mathematics. The paper you hand in should be a polished presentation that presents gives all of the main steps of the solution.

Below are some suggestions to help with the written assignment.

- DO write in complete sentences. Use your textbook as an example as to how we communicate mathematics. Most of what you say should be expressed in complete sentences.
- DO display important or lengthy equations. This means to write them on a line by themselves and center them on the paper.
- DO refer to the results from the textbook in your solution. Many of the important results of the course have a name which make it easy to refer to them.
- DON'T use words when mathematical notation is available and more precise.
- DON'T use words that are clearly and obviously completely unnecessary, not needed and that you can do without. Write simply.
- DO write legibly or use software to prepare solutions. If you use word processing software, you may add equations or graphs by hand.
- DON'T cross out mistakes. Use a pencil or a word processor.
- DO work out the problem on scratch paper. Most of us do not write a perfect solution on our first try.
- DON'T hand in your scratch work. After you understand how to solve a problem, look for unnecessary steps or points that can be made clearer. Include these improvements in the final solution.
- DON'T use arrows to connect steps in the argument.
- DO use words to describe each of the main steps of your solution. Thus, rather than writing something like $4x + 1 = 9 \rightarrow x = 2$, write "Solving the equation $4x + 1 = 9$, we obtain $x = 2$."
- DON'T misuse the equals sign. Students will sometimes write " $x^2 = 2x$ " when they mean "The derivative with respect to x of x^2 is $2x$."

- DO describe your variables. When you introduce variables in word problems, carefully describe what the variable stands for. It is often convenient to do this in a diagram.
- DO be precise.
- DO make a sketch to summarize the information in word problem.
- DO label your axes and the important elements in a figure.
- DO give the units in applied problems.
- DO spell words correctly.