Laying out the Problem

Presentation is very important in mathematics, just as it is in other fields. The main reason for this is clarity. Good presentation allows you to communicate more clearly the content of your work. A secondary reason is the appearance of competence. Careful presentation makes the reader think you were also careful with the content of your work. Although good presentation is rarely successful at bluffing past poor content, poor presentation can easily ruin good content.

The first thing the reader evaluates is the overall visual layout of the problem. Exactly how polished this should be will depend on the purpose of your writing. For our purposes, we have the following rules:

- Put the good problem on its own sheet of paper, separate from any other problems. Regular quality paper is fine, but there should be no ragged edges or tears.
- If you need more than one page, staple (no folded corners!) them together and put your name and the page number on each page.
- Leave margins on all sides.
- Print neatly or type. Do not switch colors or from pen to pencil in the middle of the problem. (You can use different colors to highlight if you wish.)
- If you had to cross out material or erased a lot and left smudges, rewrite the problem. (It is a good habit to solve the problem first on scrap paper and then copy it neatly.)

The reader next needs to know what it is they are reading. On top of the first page, put:

1. your full name,
2. the course and section or recitation number, and
3. the assignment number and/or the date the assignment is due.

Next is the format for the problem itself:

- Label the problem with the chapter, section, and problem number.
- Write out the entire question, including any instructions. If the question refers to another problem, include the relevant information from that problem. The goal is to make your work as self-contained as possible, so the reader does not need to look anything up.
- Do the problem in some logical order. Do not do the problem in several disjoint pieces connected by arrows.

All these rules may seem picky. Once you have learned this way to lay out your work, you will understand the principles behind these rules. Then you will know when to change the rules.

Acknowledgements: If you had help with this problem, or in any way include work that is not your own, then give proper credit. Not only is this the nice thing to do, but also it will protect you from allegations of cheating.

Good presentation is important in mathematics. It lets you communicate your work more clearly and lends it credibility.

Example:

Good:

Full Name
Course and section or recitation number
Assignment number
Date

Section number, problem number. Full text of the problem . . . blah . . . blah . . . blah . . . blah.

In this problem we . . . blah . . . blah . . . blah . . . blah . . . blah . . . blah . . . blah . . . blah.
There is a separate handout on introductions.

Since . . . blah . . . blah . . . we know . . . blah . . . blah.
There is a separate handout on logical connectives.

$\Longrightarrow$ blah
$\Longrightarrow$ blah blah
$\therefore$ blah!
There is a separate handout on mathematical symbols.

From this we can conclude . . . blah . . . blah . . . blah . . . blah and so $x = 3\pi \ldots \ldots$ . . . blah.
There is a separate handout on incorporating mathematics into sentences and other issues of 'flow'.

By graphing our solution, we can see that . . . blah.

There is a separate handout on graphing.

By using . . . blah . . . blah . . . we were able to solve this problem . . . blah . . . blah . . . blah . . . blah.
There is a separate handout on conclusions.

Acknowledgements: I worked with so-and-so on this problem and also had help from so-and-so.