

Math 110 Basic Calculus 1

Comments on Lab Team Writing Assignments

Everyone's paper looks different; this is as it should be – the paper represents your group's understanding of your own experimentation and your group's individual choices about presentation. These choices are important in determining the effectiveness of the writing; you should discuss the organization and the emphasis of the text you present.

Organization: Often a series of questions is the guide for the topic(s) of your writing. The questions serve as motivation for your essay, not as an outline or even as an order for your essay. It is left to you to decide how to respond to the questions in a logical and well-structured explanation. A series of questions may result in a single paragraph or in a two page essay; it all depends on what is necessary to respond clearly to the issues raised.

Symbols and Equations: Mathematical symbols such as π or Σ can be written in by hand (neatly!). Always be sure to proofread your paper carefully so that you do not forget to write them in. Also any variable that you discuss should be defined and its units given.

It is acceptable (and sometimes seems necessary) to include equations and mathematical conditions within English sentences. This can be done by using “display” equations like

$$S' = -0.00001SI$$

or using “in line” math such as $a = 0.00001$.

Numerical Observations: If you want to report that a change in some variable causes some change in results, such as

“Lowering “c” causes the population to increase more gradually.”,

you support your conclusion better by showing the results of your experimentation. This can be done by reporting some values or by systematically reporting results in a table such as this:

c	$P(0)$	$P(1)$	$P(2)$
0.01	1400	1414.07	1428.28
0.05	1400	1471.78	1547.24
0.10	1400	1547.24	1709.96

It is acceptable to prepare a word-processed table like the one above; it is also acceptable to write in tables, formulas, and graphs by hand.

Graphs: Graphs should always have the axes labeled. There should also be an indication of the scale of the graph as well as labeling of significant points on the graphs. Some people like to include graphs within the body of the paper; others choose to put graphs on separate pages. Whatever you do, make sure the text refers to the graph (as in “see Graph 1”) when you want your reader to look at the diagram.

Composition and Grammar: Pay attention to the correctness of your English. Typical distracting errors include

Disagreement of subject and verb (singular v. plural)

Incomplete sentences.

Sentences are too long.

Sentences are consistently too short.

Overuse of pronouns, especially “it.”

Here are some common misuses of words.

it's vs *its*. The word *its* is the possessive form of *it*. The word *it's* is a contraction of *it is*.

affect vs *effect*. *Affect* is a verb; *effect* is a noun.

than vs *then*. It is incorrect to say “*a* is bigger *then* *b*.” *Than* is used for comparisons.

An easy way to identify problems in writing is to read your paper aloud to your teammates. You can hear when sentences run too long or when sentences do not make sense.

Structure: Your Lab Report is usually responding to a number of questions or reflecting your understanding of the underlying concepts you discovered or explored during lab time. Your paper should reflect that focus. Paragraphs should have topic sentences which describe what those paragraphs are about and your first paragraph should contain a thesis or summary sentence which describes what the entire report is about.

Group Dynamics: Either on your Grade Allocation sheet or on a separate page in your Lab Report you should comment on the Group Dynamics of your Lab Group. In other words, recount how often, when and for how long did you meet, the nature of the communication and discuss how tasks get assigned and completed. The reason for this is to get you to think about the process of working in groups and explicitly articulating what you think works well and what doesn't and hopefully will lead to a better functioning group now and in your future endeavors.

Grading: Part of your team responsibility will be to meet to discuss how to distribute the grade points so that they accurately reflect the work and efforts of each group member on the assignment. For each lab, there will be a Grade Allocation sheet for you to fill in, sign and hand in with your lab. **Without this sheet, your lab grades cannot be recorded.**

Advice: I return only one graded copy of the lab to each team. Be sure to keep a copy of each graded lab for reference later.