A Mathematical Writing Checklist

Below is a list of guidelines you should follow for mathematical papers. For more details, please consult *A Guide to Writing Mathematics*.

- ☐ **Is your paper neatly typed?**

  If you write the equations by hand, make sure that you have written in *all* of the equations. Also make sure that you have included all of the diagrams and graphs you intended to. Make sure that the paper is double-spaced and has wide enough margins.

- ☐ **Has the paper been proofread?**

  In college, sloppy work is not appreciated. Do check over everything.

- ☐ **Is there an introduction?**

  Make sure that you explain the problem to the reader. Assume that the reader is unfamiliar with the problem. The introduction should also try to indicate to the reader why the problem is interesting and give some indication of what will follow in the paper.

- ☐ **Did you state all of your assumptions?**

  Write down any physical assumptions that you made. (Did you assume that there was no friction? That the population grew with unlimited resources? That interest rates remained steady?) Write down any mathematical assumptions that you made. (Did you assume that the function was continuous? Linear? That x was a real number?)

- ☐ **Are the grammar, spelling, and punctuation correct? Is the writing clear and easy to understand?**

  Make sure that there are no sentence fragments. The formulas and equations too need to be contained in complete sentences. Equations and formulas (and the words too) should have correct punctuation as well. Make sure that your paper flows smoothly and reads well. And please, don't be careless! Check your spelling!

- ☐ **Are all of the variables defined and described adequately?**

  Make sure that you introduce each variable that you use. Describe each variable as precisely as possible. Don't forget any units!

- ☐ **Are the mathematical symbols used correctly?**

  Don't use an "=" sign outside of a formula. Make sure that the symbols are not misused. Use equations and formulas where they are appropriate.

- ☐ **Are the words used correctly and precisely?**

  Avoid using vague language and too many pronouns. Use words where they are appropriate.

- ☐ **Are the diagrams, tables, graphs, and any other pictures you include clearly labeled?**

  Graphs should be drawn with a straight edge (or computer-generated) with axes clearly labeled (with units if appropriate) and the scale indicated. Diagrams should be neatly drawn with relevant labels.

- ☐ **Is the mathematics correct?**

  This should be obvious.

- ☐ **Did you solve the problem?**

  Sometimes in all of the fuss, people forget to answer the problem. Do answer the question! Also, see if you can write the solution in "real-world" terms.