

A Sample Article for the Monthly

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Abstract

This sample article shows what the final version of an article for the Monthly should look like. We also discuss some formatting issues that come up often in Monthly papers and give some advice about using \LaTeX to prepare your paper.

1 Introduction.

This sample article explains and illustrates many of the conventions you should follow in preparing the final version of your paper for the Monthly. There is no need to try to imitate the appearance of papers in the Monthly—the typesetter will take care of that. However, it is helpful to have all of the parts of your paper typed correctly and arranged in the proper order. This document and other information about preparing and submitting papers to the Monthly can be found at <http://www.cs.amherst.edu/~djh/monthly/>.

2 Anatomy of a Monthly Article.

The title and the names of the authors appear at the top of the first page, but author affiliations and addresses are not listed there. Next comes the abstract, which will appear at the beginning of the published paper and will also be posted at the MAA website. The abstract should not contain any labels from your paper, such as equation numbers or reference numbers. Acknowledgments and dedications go at the end, before the references. The references section of this article illustrates how the most common kinds of references should be formatted. For further information about formatting of references, see [2]. References should be in alphabetical order, alphabetized by the last name of the first author. They should be numbered, and they should be cited in the body of the paper using these numbers in brackets. You can make your reference citations more useful to readers by including additional information inside the brackets. For example, to help readers learn about the fundamental theorem of calculus, you might refer them to [1, pp. 202–205] or [6, Theorem 8.18, p. 177]. Biographical sketches of the authors appear at the end, after the references. Each biographical sketch should be roughly 300–600 characters. It should be written in the third person, and should normally begin with the author’s name. It might include such items as undergraduate and graduate schools, a sample

of various professional employment, honors and awards, and primary research interests. A glance at recent issues of the Monthly will give you an idea of the format; feel free to be creative. Each biographical sketch ends with the author's address and email address.

3 Common Formatting Issues.

Here are some formatting issues that come up fairly often:

- When writing ordinal numbers, don't use superscripts: 1st, 2nd, n th, not 1^{st} , 2^{nd} , n^{th} .
- Words starting with "non" are usually not hyphenated: nonzero, nonempty, nonnegative, nonintegral, nonlinear, nontrivial. Other common words that are not hyphenated: counterintuitive, counterexample.
- Common hyphenated phrases: half-plane, left-hand side, three-dimensional space, first-order equation.
- Common Latin abbreviations: "I.e." means "that is" (or "in other words"), and "e.g." means "for example"; be careful not to mix them up. Both should be followed by a comma. "Cf." means "compare" or "compare with"; it shouldn't be used if what you mean is "see." "Et al." means "and others"; notice that "et" is a complete word, not an abbreviation, so it is not followed by a period.
- In lists, include a comma and the word "and" before the last item. For example, write " a , b , and c " not " a , b and c " or " a , b , c ."
- Use phrases that read naturally. For example, avoid phrases like "for some $1 \leq i \leq n$ "; it is better to write "for some i such that $1 \leq i \leq n$."
- In definitions, the word being defined is usually written in italic. The rest of the definition should be in roman.
- Include punctuation at the end of displayed formulas when appropriate. For example, if the displayed formula is the end of a sentence, it should end with a period.
- The statement of a theorem is not part of the sentence that precedes it. The last sentence before the statement of a theorem should be a complete sentence, ending with a punctuation mark.

4 Using L^AT_EX.

If you use L^AT_EX to prepare your paper, it is best to use the L^AT_EX article style with no custom formatting. If your paper has sections, use the `\section` command for your section headings. Section headings should usually end with

a punctuation mark, most often a period. Use the `\theoremstyle` command (in the `amsthm` package) to control the formatting of theorems, definitions, and other theorem-like environments. Use the `plain` style (which is the default) for theorems, lemmas, propositions, and corollaries; use the `definition` style for definitions and the `remark` style for remarks. If you use `BIBTEX` for your references, you may find our `BIBTEX` style file helpful. You can find it, as well as the `LATEX` source file for this sample article, at <http://www.cs.amherst.edu/~djv/monthly/>.

Acknowledgments. I would like to thank Paul Erdős for letting me borrow his name for this article, thus giving me an Erdős number of one. (For information about Erdős numbers, see [3], [4], and [5].) You may want to thank someone else, or some organization that funded your research. There's no need to thank the editor—he's only doing his job.

References

- [1] T. Apostol, *Calculus*, 2nd ed., vol. 1, John Wiley, New York, 1967.
- [2] N. Board, Formatting references for the Monthly, available at <http://www.cs.amherst.edu/~djv/monthly/FormattingReferences.pdf>.
- [3] R. De Castro, On the Erdős number, *Lect. Mat.* **17** (1996) 163–179.
- [4] C. Goffman, And what is your Erdős number?, *Amer. Math. Monthly* **76** (1969) 791.
- [5] J. Grossman, P. Ion, and R. De Castro, The Erdős Number Project, available at <http://www.oakland.edu/enp/>.
- [6] W. Rudin, *Real and Complex Analysis*, 2nd ed., McGraw-Hill, New York, 1974.

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