
Description and Illustration of Use: A L^AT_EX Template for The American Mathematical Monthly

Double Blind No Name1 and Double Blind No Name2

Abstract. Abstracts for articles or notes should entice the prospective reader into exploring the subject of the paper and should make it clear to the reader why this paper is interesting and important. The abstract should highlight the concepts of the paper rather than summarize the mechanics. The abstract is the first impression of the paper, not a technical summary of the paper. Excessive use of notation is discouraged as it can limit the interest of the broad readership of the MAA, and can limit searchability of the article. Your abstract should be 250 words or less.

The MONTHLY's readers expect a high standard of exposition; they look for articles that inform, stimulate, challenge, enlighten, and even entertain. MONTHLY articles are meant to be read, enjoyed, and discussed, rather than just archived. Articles may be expositions of old or new results, historical or biographical essays, speculations or definitive treatments, broad developments, or explorations of a single application. Novelty and generality are far less important than clarity of exposition and broad appeal. Appropriate figures, diagrams, and photographs are encouraged.

- MONTHLY articles are 6 to 20 pages.
- MONTHLY notes are 2 to 5 pages.

1. MANUSCRIPT PREPARATION. *American Mathematical Monthly* authors are expected to submit their manuscripts in L^AT_EX. Using this template as a guide will save everyone time and allow your article to smoothly navigate through the submission process.

The MONTHLY style incorporates the following L^AT_EX packages. Therefore, these packages should *not* be included in the document preamble.

- times
- pifont
- graphicx (this package is included in the MONTHLY T_EX style file and might cause errors or conflicts when compiling your document. If you remove it, it should compile just fine.)
- color
- AMS styles: amsmath, amsthm, amsfonts, amssymb
- url

Use of other L^AT_EX packages should be minimized as much as possible. Math notation, like $c = \sqrt{a^2 + b^2}$, can be left in T_EX's default Computer Modern typefaces for manuscript preparation; or, if you have the appropriate fonts installed, the `mathtime` or `mtpro` packages may be used.

Web links can be embedded using the `\url{...}` command, which will result in something like <http://www.maa.org>. These links will be active and stylized in the online publication.

Headings. `\section{...}` headings are all caps and are run-in to the text.

`\subsection{...}` headings are initial cap only and are also run-in to the text. It is not necessary to add font commands to make the math within headings bold and sans serif; this change will occur automatically when the production style is applied.

Graphics. Figures for the MONTHLY can be submitted as either color or black & white graphics. If color graphics are included with the submission, they will be used for the online publication only, and converted to black & white images for the print journal. If an author wishes to receive a quote to have color images printed, please let the Editorial Office know.

Please follow these guidelines to ensure that your figures look their best online and in print.

1. Line weight should be no less than .5 pt and rarely thicker than 1 pt. This can be a problem in tikz where the default is less than .5 pt.
2. Use the appropriate fonts (Times New Roman, italic, bold, etc. to match the text) and font size for figures (9 pt labels and 8 pt for axes).
3. The appropriate resolution for bitmaps is a minimum 300 dpi. High resolution bitmaps are acceptable as long as you use the correct fonts, font size, and line weight—bitmaps are not editable in the same way as EPS or SVG files so you must negate the need for them to be edited.
4. The paper size for the print journal is 5 inches wide and 8 inches long. Figures cannot be greater than 5 inches wide.
5. **Do not scale your figures in your \LaTeX document.** Scaling your figures in your \LaTeX document can result in your line weights becoming too thin and your fonts becoming too small.
6. Line art will reproduce best if provided in vector form, preferably EPS or SVG.
7. Please **EXPORT** figures from programs like Mathematica or Maple. Do not use “save as.”
8. Creating a PDF does not affect whether the graphic is a bitmap or vector; saving a scanned piece of line art as PDF does not convert it to editable vector line art.
9. If you generate graphics using a \TeX package, such as tikz, please be sure to provide a PDF of the manuscript with the \TeX file of the graphic. In the production process, \TeX -generated graphics will eventually be converted to more conventional graphics so the MONTHLY can be delivered in e-reader formats.

Tables. Tables in the MONTHLY’S style appear with the caption above the table.

Table 1. Here is a caption for this table.

Monotonicity	m	k_i	Protocol?
Monotone	≥ 3	Arbitrary	No [1]
Monotone	2	Arbitrary	Yes [2]
Arbitrary	2	$k_1 = 1$ or $k_2 = 1$	Yes [Theorem 2]
Non-monotone	2	$k_1, k_2 \geq 2$	No [Theorem 3]

Theorems, definitions, proofs, and Etc. Following the defaults of the `amsthm` package, styles are provided for `theorem`, `definition`, and `remark`, although the latter two use the same style.

Theorem 1 (MAA Theorem). *Theorems, lemmas, axioms, and the like use italicized text. These environments (along with definitions, remarks, and notes) will be numbered in consecutive order.*

Proof. Proofs are set in roman (upright) text, and conclude with an “end of proof” (q.e.d.) symbol that is set automatically when you end the proof environment. When the proof ends with an equation or other non-text element, you need to add `\qedhere` to the element to set the end of proof symbol; see the `amsthm` package documentation for more details. ■

Definition 2 (Monthly definitions). Definitions, remarks, and notation are stylized as roman text.

Remark 3. Remarks stylize the same as definitions.

The MONTHLY’S equations are numbered with integers, beginning with (1), on the right side of the equation when using the `equation` environment.

$$c = \sqrt{a^2 + b^2} \quad (1)$$

References. Beginning in January 2024 the MONTHLY will use the NLM reference style. Bib_TE_X users should use `vancouver.bst` to typeset their references.

The Code. To cite a reference in-text use

`\cite{key}`

where `key` is the name of the reference used in your `.bib` file. In the place where you want to put your bibliography, type the following commands:

`\bibliographystyle{vancouver}`
`\bibliography{VancouverExamples}`

where `vancouver` is the name of a `.bst` file and `VancouverExamples` is the name of your `.bib` file.

Example with Citations. We cite many authors in this paper whose work is notable, such as [1, 3, 4, 5, 6, 2, 7]. The works by these authors are important to read, [8, 9, 10]. In addition, this work is important [11].

2. MANUSCRIPT SUBMISSION. All authors must produce at least two documents as part of their formal manuscript submission, a cover letter and an anonymized manuscript. Manuscripts must be submitted through the MONTHLY’S Editorial Manager system: <https://www2.cloud.editorialmanager.com/monthly/default2.aspx>.

Cover Letter. The first document is a cover letter that must include the following.

- all author names, affiliations, and email addresses
- a statement of original research
- a statement about why your manuscript fits into the aims and scope of the MONTHLY.

- please disclose any conflicts of interest
- keywords

Please use the template *CoverLetterTemplate.tex* to generate this cover letter.

IMPORTANT NOTE: If you do not upload a cover letter, Editorial Manager will give you an error message and not allow you to submit your manuscript.

Manuscript. Use this template and *maa-monthly.sty* to prepare your manuscript.

Review. The MONTHLY uses a double-blind review process.

- This template should be used to prepare your manuscript for the MONTHLY.
- No revisions or updated manuscripts will be considered while a manuscript is under review.

Manuscript data in Editorial Manager.

- Authors' affiliations are the affiliations where the research was conducted. If any of the named co-authors changes affiliation during the peer-review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after your paper is accepted.
- Funding Information. **If applicable**, please supply all details required by your funding and grant-awarding bodies as follows:
 - For single agency grants: This work was supported by the [Funding Agency] under Grant [number xxxx].
 - For multiple agency grants: This work was supported by the [Funding Agency #1] under Grant [number xxxx]; [Funding Agency #2] under Grant [number xxxx]; and [Funding Agency #3] under Grant [number xxxx].

Mathematics Subject Classification. Authors should provide the appropriate 2020 Mathematics Subject Classification terms for their paper.

- The "Mathematical Subject Classification Index (MSC)," is available at <http://www.ams.org/msc/msc2020.html>, or in pdf form at <https://www.mathscinet.ams.org/msc/pdfs/classifications2020.pdf>.
- When submitting your manuscript, please provide at least one and up to three 5-digit MSC classifications that best describe your paper.

ACKNOWLEDGMENTS. The authors wish to thank the Greek polymath Anonymous, whose prolific works are an endless source of inspiration. If you have funding, please acknowledge the funding agency and reference the grant.

REFERENCES

- [1] Mathematical Association of America [homepage on the Internet]. Washington DC: The Association; 2024 [updated 2024 Jan 23; cited 2024 Jan 12]. Publications. Available from: <https://maa.org/press/periodicals>.
- [2] Lawrence J. A Catalog of Special Plane Curves. Mineola: Dover Publications; 2014.
- [3] Nelsen R. Proofs Without Words II: More Exercises in Visual Thinking. vol. 14 of Classroom Resource Materials. Washington DC: Mathematical Association of America; 2000.
- [4] Chartrand G, Lesniak L, Zhang P. Graphs and Digraphs. 5th ed. New York (NY): Chapman & Hall/CRC Press; 2011.
- [5] Aslaksen H, Kirfel C. Integration by Riemann Triangles. Math Mag. 2024;97(1):4-22.

- [6] Euler L. *Solutio problematis ad geometriam situs pertinentis*. *Commentarii academiae scientiarum Petropolitanae*. 1741;8:128-40.
- [7] Hardy G, Littlewood J, Pólya G. *Inequalities*. Cambridge: Cambridge University Press; 1934.
- [8] Blackburn S, Neumann P, Venkataraman G. *Enumeration of finite groups*. Cambridge: Cambridge University Press; 2007.
- [9] Campbell H, Wehlau D. *Modular invariant theory*, *Encyclopaedia of Mathematical Sciences*. vol. 139. Berlin: Springer-Verlag; 2011.
- [10] Chang H, Chen Y, Zhang R. A generalization on derivations of Lie algebras. *Electron Res Arch*. 2021;29(3):2457-73.
- [11] Campbell H, Chuai J, Shank R, Wehlau D. Representations of elementary abelian p -groups and finite subgroups of fields. *J Pure Appl Algebra*. 2019;223(5):2015-35.

After you receive your provisional acceptance letter, you need to re-submit your manuscript with the information previously commented out in the blind submission filled in for each author. Just remove the % comment coding in this L^AT_EX template, fill out the information, and re-submit your manuscript.