```
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[![logo](../assets/arxiv-logo-one-color-white.svg)](https://arxiv.org "arXiv
info")
arXiv info
What is MathJax?
Initializing search
[ GitHub ](https://github.com/arXiv/arxiv-docs "Go to repository")
[![logo](../assets/arxiv-logo-one-color-white.svg)](https://arxiv.org "arXiv
info") arXiv info
[ GitHub ](https://github.com/arXiv/arxiv-docs "Go to repository")
 * [ Home ](../index.html)
 * About About
  * [ About arXiv ](../about/index.html)
  * [ Who we are ](../about/people/index.html)
```

Skip to content

- * Governance Governance
- * [arXiv Governance Model](../about/governance.html)
- * [Bylaws](../about/arXiv bylaws.html)
- * [arXiv Advisory Board](../about/people/arxiv_advisory_board.html)
- * [Science Advisory Council](../about/people/science_advisory_council.html)
- * [Editorial Advisory Council](../about/people/editorial_advisory_council.html)
- * [Institutions Advisory Council](../about/people/institutions_advisory_council.html)
- * [Membership](../about/membership.html)
- * [Funding](../about/funding.html)
- * [Reports](../about/reports/index.html)
- * [Accessibility](../about/accessibility.html)
- * [arXiv Blog](https://blog.arxiv.org/)
- * Help Help
 - * [arXiv Help Contents](index.html)
 - * Submit an Article Submit an Article
 - * [Submission Overview](submit/index.html)
 - * [Submit TeX/LaTeX](submit_tex.html)
 - * [Submit a PDF](submit_pdf.html)
 - * FAQ FAQ
 - * [Frequently Asked Questions](faq/index.html)
 - * [LaTeX2e class for Astronomy & Astrophysics](fag/aaclass.html)
 - * [AMS LaTeX packages and AMS Journal styles](fag/amslatex2000.html)
 - * [Downloaded .gz Files that are not Gzipped](faq/browsergunzip.html)
 - * [Why do my citations appear in long form](faq/citelinks.html)
 - * [Examples of TeX Double Subscripts](faq/doublesubscript.html)
 - * [Papersize/Layout Problems: Margins are Different and/or Text is Truncated](fag/dvips.html)
 - * [Using Feynmf on arXiv](fag/feynmf.html)

- * [Proprietary fonts and/or their free equivalents](faq/freefonts.html)
- * [How to Prepare Pages for Landscape Printout](faq/landscape.html)
- * [Common Mistakes that cause Automated Processing to Fail](faq/mistakes.html)
- * [Why do my user defined symbols display incorrectly](faq/pd1enc.html)
- * [Why are some pages in the generated PDF file rotated?](fag/pdfrotate.html)
- * [Why are there Problems with my PostScript File?](faq/psbad.html)
- * [Why is my PostScript File so Large?](faq/psjunk.html)
- * [Using PSTricks on arXiv](faq/pstricks.html)
- * [References to and in arXiv Documents](fag/references.html)
- * [Status of REVTeX 4 and REVTeX 4.1 support](faq/revtex.html)
- * [Nota Bene (updated 30 Jun '97)](faq/srcfaq.html)
- * [Frequently Asked Questions on Public Statistics](fag/statfag.html)
- * [Notes about arXiv's TeXLive Version](fag/texlive.html)
- * [Why doesn't my processed TeX submission look the way I expected it?](fag/texprobs.html)
- * [Textures](faq/textures.html)
- * [Why Does My Paper Give the Wrong Date?](fag/today.html)
- * [Why doesn't my paper have the arXiv id stamped on the side of the page?

](faq/whynostamp.html)

- * [Status Information](submit status.html)
- * [Ancillary Files (data, code, images)](ancillary_files.html)
- * [Availability of submissions](availability.html)
- * [Category cross listing](cross.html)
- * [Endorsement](endorsement.html)
- * [Adding Journal Reference and DOI](jref.html)
- * [Licenses](license/index.html)
- * [Text Overlap](overlap.html)
- * [Metadata for Required and Optional Fields](prep.html)

- * [Submit a new version of a work](replace.html)
- * [Oversized Submissions](sizes.html)
- * [Submit a Paper List for Conference Proceedings](submit_index.html)
- * [Creating tar and zip Files for Upload](tar.html)
- * [What is TeX](tex.html)
- * [Proxy / Third Party Submission](third_party_submission.html)
- * [Translations](translations.html)
- * [Version Availability](versions.html)
- * [Why Submit TeX?](fag/whytex.html)
- * [Withdraw / Retract a Submission](withdraw.html)
- * Find and Read Articles Find and Read Articles
 - * [Finding Articles](find/index.html)
 - * [Search for articles](find.html)
 - * [Viewing submissions](view.html)
 - * [Email subscriptions for new papers](subscribe.html)
 - * [arXiv Identifier](arxiv_identifier.html)
 - * [Configuring your browser](config_browser.html)
 - * [RSS Feeds](rss.html)
 - * [Licenses](license/index.html)
 - * [Permissions and Reuse](license/reuse.html)
 - * What is MathJax? [What is MathJax?](mathjax.html) Table of contents
 - * What is MathJax?
 - * Where is MathJax being used on arXiv?
 - * How do I know if MathJax is being used on an arXiv page?
 - * Can I see the underlying \$\TeX\$ coding?
 - * Can I disable MathJax?
 - * As an arXiv submitter, how can I make the best use of MathJax?

- * Where can I get help regarding MathJax?
- * How do I report a problem?
- * Accounts Accounts
 - * [Index](accounts/index.html)
 - * [Directions for Author Registration](registerhelp.html)
 - * [Author Identifiers](author_identifiers.html)
 - * [ORCID identifiers](orcid.html)
 - * [Authority Records](authority.html)
 - * [Why isn't a Person "Registered as an Author?"](not-registered.html)
- * Bulk Access to Metadata and Full Text Bulk Access to Metadata and Full Text
 - * [Index](bulk_data/index.html)
 - * [arXiv Identifier for Interacting Services](arxiv_identifier_for_services.html)
 - * [Full Text via S3](bulk_data_s3.html)
 - * [API for Metadata](api/index.html)
 - * [RSS Feeds](rss.html)
 - * [Institutional Repository Interoperability](ir.html)
 - * [Automated DOI and journal reference updates from publishers](bib_feed.html)
- * Brand Brand
 - * [Our Brand](../brand/index.html)
 - * [Name and logo use](../brand/brand-guidelines.html)
 - * [Brand pillars](../brand/brand-pillars.html)
 - * [Colors](../brand/colors.html)
 - * [Fonts](../brand/fonts.html)
 - * [Images](../brand/images.html)
 - * [Logos](../brand/logos.html)
 - * [Quotes](../brand/quotes.html)
 - * [Swag](../brand/swag.html)

- * [Tagline](../brand/tagline.html)
- * [Typography](../brand/typography.html)
- * [Voice](../brand/voice.html)
- * Labs Labs
 - * [arXivLabs: An invitation to collaborate](../labs/index.html)
 - * [arXivLabs: Showcase](../labs/showcase.html)
- * Policies Policies
 - * [arXiv Policies](policies/index.html)
 - * [Code of conduct](policies/code of conduct.html)
 - * [Privacy policy](policies/privacy_policy.html)
 - * [Identity, affiliation, and registration](policies/identity_and_affiliation.html)
 - * [Submission terms and agreement](policies/submission_agreement.html)
 - * [Paper ownership](authority.html)
 - * [Submission Guidelines](submit/index.html)
 - * [Submission schedule and cutoff time](availability.html)
 - * [Content Moderation](moderation/index.html)
 - * [License and copyright](license/index.html)
 - * [Withdrawals](withdraw.html)
 - * [Cross listing](cross.html)
 - * [Translations](translations.html)
 - * [Non-English submissions](fag/multilang.html)
 - * [Text Overlap](overlap.html)
 - * [Requiring TeX when possible](faq/whytex.html)
 - * [Third party submission](third_party_submission.html)
- * [Categories](https://arxiv.org/category_taxonomy)
- * [arXiv Usage Stats](stats/index.html)

Table of contents

- * What is MathJax?
 - * Where is MathJax being used on arXiv?
 - * How do I know if MathJax is being used on an arXiv page?
 - * Can I see the underlying \$\TeX\$ coding?
 - * Can I disable MathJax?
 - * As an arXiv submitter, how can I make the best use of MathJax?
 - * Where can I get help regarding MathJax?
 - * How do I report a problem?

[](https://github.com/arXiv/arxiv-docs/blob/develop/source/help/mathjax.md "Edit this page")

What is MathJax?

MathJax is a javascript display engine for rendering \$\TeX\$ or MathML-coded mathematics in browsers without requiring font installation or browser plugins. Any modern browser with javascript enabled will be MathJax-ready. For general information about MathJax, visit mathjax.org.

Below are questions and answers about the use of MathJax on arXiv.

Where is MathJax being used on arXiv?

We have enabled MathJax on this help page, article abstract and list pages, the user account page, the submission preview page, search result pages, and HTML renderings of articles. On these pages, MathJax has been configured to render inline (\$-enclosed) \TeX only. For example, the expression \TeX = {n \choose k} p^k (1-p)^{ n-k}\$ will be rendered as \TeX = {n \choose k} p^k (1-p)^{ n-k}\$. On arXiv's articles rendered in HTML, both MathJax and MathML are used, but in all other places only MathJax is used.

In general, outside of HTML articles MathJax will only attempt to render \$\TeX\$ in the article title, abstract and comments fields.

How do I know if MathJax is being used on an arXiv page?

MathJax-enabled pages may briefly display a small box to indicate that the MathJax configuration is being loaded, regardless of whether there is any renderable \$\TeX\$ on the page. Valid \$\TeX\$ expressions will be displayed by MathJax as the page is being loaded. On abstract pages, any \$\TeX\$ expressions that MathJax cannot render will be displayed in their original text.

On the user account and submission preview pages, rendering errors or unknown macros are displayed in red. For example: \$\invalid_TeX\$.

Can I see the underlying \$\TeX\$ coding?

Yes, to access the underlying \$\TeX\$, right- or control-click on a rendered math formula, and choose the format you want from the `Format` sub-menu. Then select the `Show Source` menu item to get a pop-up that allows you to copy the math source into another application.

To try this feature, visit

https://cdn.mathjax.org/mathjax/latest/test/sample-dynamic.html.

Alternatively, MathJax can be disabled entirely (see below).

Can I disable MathJax?

Yes, you can disable (and re-enable) MathJax by clicking the following link to set a cookie:

[Disable MathJax](javascript:setMathjaxCookie\(\))

When MathJax is disabled, mathematical expressions are displayed as text with the original \$\TeX\$ delimiters.

Note that on any particular MathJax-enabled page in arXiv, not all expressions may be renderable. So turning MathJax on or off may have no effect on the visual appearance of certain math expressions.

As an arXiv submitter, how can I make the best use of MathJax?

MathJax supports a very large subset of \$\TeX\$ mathematics, including AMS math and symbols. arXiv's implementation of MathJax does not support user-defined macros. For example, if an abstract contains \$\rtwo\$ as a shortcut for \$\mathbf{R}\^2\$, then MathJax will not be able to render this expression.

Submitters should use only standard La\$\TeX\$ and AMS-La\$\TeX\$ macros in paper titles and abstracts.

Also, since '<' is a reserved character in HTML, special care must be taken in its use. Usually just adding a space after it will suffice for it not to be interpreted as the start of an element name (e.g., 'x < y', not 'x<y'); but if in doubt, use the entity reference '<'.

Where can I get help regarding MathJax?

The MathJax web site has useful information about browser configuration, fonts, MathJax features, etc. Please see the [MathJax documentation](https://docs.mathjax.org/en/latest/index.html) and the [FAQ](https://docs.mathjax.org/en/latest/misc/faq.html) if you have questions.

How do I report a problem?

If you wish to report a problem, or if you have questions about arXiv's use of MathJax, please first visit the [contact](contact.html) page.

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