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Encyclopedia of Mathematics

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Springer The European Mathematical Society

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Main Page

The Encyclopedia of Mathematics wiki is an open access resource designed specifically for the mathematics community. The original articles are from the online Encyclopaedia of Mathematics, published by Kluwer Academic Publishers in 2002. With more than 8,000 entries, illuminating nearly 50,000 notions in mathematics, the Encyclopaedia of Mathematics was the most up-to-date graduate-level reference work in the field of mathematics.

Springer, in cooperation with the European Mathematical Society, has made the content of this Encyclopedia freely open to the public. It is hoped that the mathematics community will find it useful and will be motivated to update those topics that fall within their own expertise or add new topics enabling the wiki to become yet again the most comprehensive and up-to-date online mathematics reference work.

The original articles from the Encyclopaedia of Mathematics remain copyrighted to Springer but any new articles added and any changes made to existing articles within encyclopediaofmath.org will come under the [Creative Commons Attribution Share-Alike License](#). An [editorial board](#), under the management of the European Mathematical Society, monitors any changes to articles and has full scientific authority over alterations and deletions.

This wiki is a [MediaWiki](#) that uses the [MathJax](#) extension, making it possible to insert mathematical equations in [TeX](#) and [L^AT_EX](#). For instructions on how this can be achieved, please see the [Help page](#).

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Logo

URL

https://www.encyclopediaofmath.org/index.php/Main_Page

Subject

Mathematics-Encyclopedias

Accessibility

Free

Language

English

Publisher

European Mathematical Society

Brief History

The articles of this encyclopedia are from the online Encyclopaedia of Mathematics, published by Kluwer Academic Publishers in 2002. With more than 8,000 entries, illuminating nearly 50,000 notions in mathematics, the Encyclopaedia of Mathematics was the most up-to-date graduate-level reference work in the field of mathematics. The encyclopedia is edited by [Michiel Hazewinkel](#) and was published by [Kluwer Academic Publishers](#) until 2003, when Kluwer became part of [Springer](#). The CD-ROM contains animations and three-dimensional objects. Springer, in cooperation with the European Mathematical Society, has made the content of this Encyclopedia freely open to the public. Until November 29, 2011, a static version of the encyclopedia could be browsed online free of charge at <http://eom.springer.de/>. This URL now redirects to the new [wiki](#) incarnation of the EOM. The encyclopedia was made free online with the hope that the mathematics community will find it useful and will be motivated to update those topics

that fall within their own expertise or add new topics enabling the wiki to become

yet again the most comprehensive and up-to-date online mathematics reference work. This new wiki is a collaboration between Springer and the [European Mathematical Society](#). This dynamic version of the encyclopedia includes the entire contents of the previous online version, but all entries can now be publicly updated to include the newest advancements in mathematics. All entries will be monitored for content accuracy by members of [an editorial board](#) selected by the European Mathematical Society. The original articles from the Encyclopaedia of Mathematics remain copyrighted to Springer but any new articles added and any changes made to existing articles within [encyclopediaofmath.org](#) will come under the [Creative Commons Attribution Share-Alike License](#). An [editorial board](#), under the management of the European Mathematical Society, monitors any changes to articles and has full scientific authority over alterations and deletions.

Scope and Coverage

In this encyclopedia, the articles are classified by MSC (Mathematical Subject Classification) and possibly categorize them according to that. MSC codes are added to the categories. These categories are:

- Logic and foundations
- Algebra
- Number theory
- Algebraic and complex geometry
- Geometry
- Topology
- Lie theory and generalizations
- Analysis
- Functional analysis and applications
- Dynamical systems and ordinary differential equations
- Partial differential equations
- Mathematical physics
- Probability and statistics
- Combinatorics
- Mathematical aspects of computer science

- Numerical analysis and scientific computing
- Control theory and optimization
- Mathematics in science and technology
- Mathematics education and popularization of mathematics
- History of mathematics

Under each main category, further categorization of topics is made by MSCwiki2010 codes and then the articles (Pages) are placed under these categories and sub categories.

As for example, the category “Algebra” has following sub categories:

Algebraic geometry

Associative rings and algebras

Category theory; homological algebra

Commutative algebra rings and algebras

Field theory and polynomials

General algebraic systems

Group theory and generalizations

Homological algebra

K-theory

Linear and multilinear algebra; matrix theory

Nonassociative rings and algebras

Order, lattices, ordered algebraic structures

All the pages or articles are placed under categories as well as under their sub categories, so one can find articles by clicking the categories and their sub categories. The encyclopedia contains 16,253 articles as on 4th October, 2016.

Kind of Information

In this encyclopedia, the articles are represented with suitable mathematical equations. This Wiki based encyclopedia uses [MediaWiki](#), with [MathJax](#) extension, to make it

possible to insert mathematical equations in TEX and LATEX.

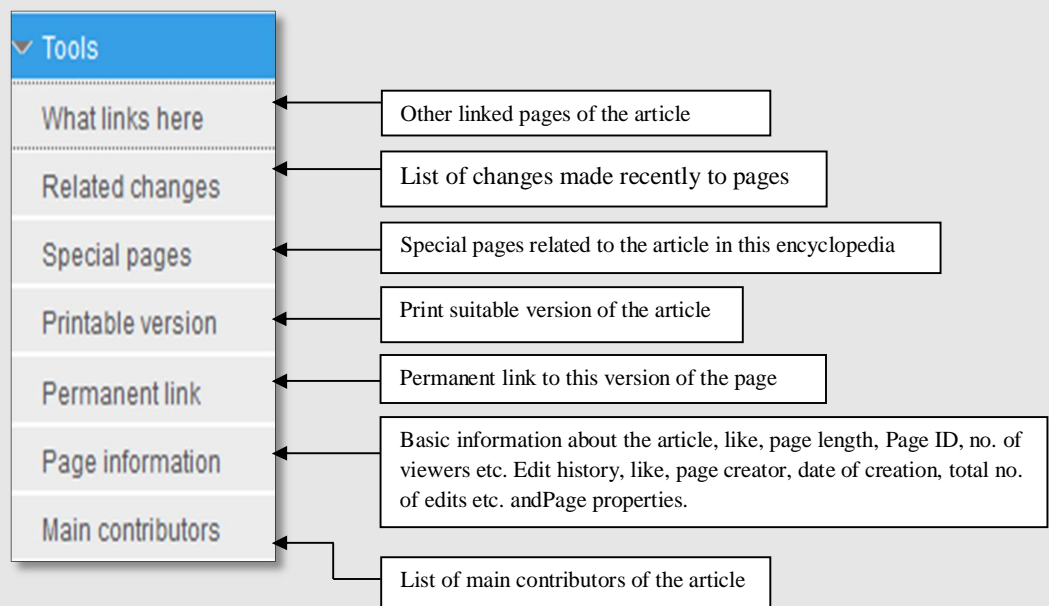
Most of the articles in this encyclopedia provide description of many mathematical terms with suitable examples by mathematical equations. At the end of the articles there are list references and comments. Some of the articles include contents.

As for example, the article “Matrix” under the category “Algebra” gives a long description about the matrix, history of the notion of this term, examples of matrix. The article includes other important points about matrix, which may be found in the content of the article:

- 1 [Operations with matrices.](#)
- 2 [Block matrices.](#)
- 3 [Square matrices over a field.](#)
- 4 [Transposition and matrices of special form.](#)
- 5 [Polynomial matrices.](#)
 - 5.1 [References](#)
 - 5.2 [Comments](#)
 - 5.3 [References](#)

All the references are coming from MathSciNet, the Mathematical review and zbMath, the first resource for mathematics. The article includes other hyperlinked words and is connected with other articles. At the top of the page, there are options “View source”, “History”. By clicking “View source” option, the source page of the article can be shown. The “History” page represents the full edit history of the article.

At the left side of the page, for all articles in this encyclopedia, there are following tool:



Special Features

- In this encyclopedia, the user is provided the option to give their suggestions or comments for a particular article. So that the articles of this encyclopedia can be enriched in quality.
- One can navigate the articles in this encyclopedia by many ways, like, A-Z alphabetic list of all articles, list of categories, list of recent changes have been made to the encyclopedia, random pages.
- Fuzzy searching facility is available here.
- In this Wiki based encyclopedia, anyone can't make a change to the articles. To edit articles, one has to make an account.

Arrangement Pattern

The arrangement of the main categories are made by MSC (Mathematical Subject Classification). The sub categories of each category are arranged according to MSC as well as under A to Z alphabets separately by the name of the sub categories. Articles or pages are found alphabetically listed under categories and also under sub categories of each category.

Remarks

This encyclopedia is a Wiki version of renowned reference source of mathematics "The Encyclopedia of Mathematics". No doubt, these two encyclopedias are good reference source of mathematics. The informational articles give essential basic knowledge on mathematics.

Comparable Tools

- Platonic Realms Interactive Mathematics Encyclopedia (<http://platonicroalms.com/encyclopedia/>)
- The On-Line Encyclopedia of Integer Sequences® (OEIS®)(<http://oeis.org/>)

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October 4, 2016