

Mathematics Resource Guide

[Periodical Indexes and Full-text Databases](#)

[Selected Websites](#)

[Selected Electronic Reference Resources](#)

[Selected Print Reference Resources](#)

This guide provides selected information resources on Mathematics. Included in this guide are the Mildred F. Sawyer Library databases, web resources, and electronic and print reference resources.

For specific book and periodical titles, check the [Suffolk University Library Catalog](#).

Periodical Indexes and Full-text Databases

The Sawyer Library subscription periodical indexes and full-text resources are available to current Suffolk University students, faculty, and staff both on campus and [off campus](#).

[Academic Search Premier](#)

Our best general research database, this online resource covers a wide range of academic areas and provides indexing and abstracting for over 8,000 journals including more than 3,600 peer-reviewed publications. Full-text access is available for nearly 4,700 of the titles. Indexing and abstracting coverage begins generally from the mid-1980's and full-text coverage for many titles dates back to 1990. You may limit search results to Full-Text and/or Scholarly (Peer Reviewed) journals. There are over 300 journal titles relating to mathematics, most are full-text or linked full-text.

[SpringerLink](#)

Includes over 29 full-text, peer-reviewed mathematics journals, as well as some book series from Springer Science+Business Media (formerly Springer-Verlag), a major European scientific publisher. Note that full-text access is available only to journals for which the Sawyer Library has a subscription. Although there is no way of restricting your search to the titles the Library subscribes to, the "eyeglass" symbol found in the search results, issue level information, and Publications List does indicate which titles are Library subscriptions.

[HighWire Press](#)

<http://www.highwire.org>

Stanford University Libraries' HighWire Press hosts over 900 scholarly journals, including many in the mathematical sciences, in a free, peer-reviewed, full-text database. Please note that full-text access is available only to journals for which the Sawyer Library has a subscription. Unfortunately there is no way of restricting your search to subscribed journals.

[Wiley InterScience](#)

Consists of over 350 scholarly, full-text journals published by Wiley, going back to 1997. This multidisciplinary database includes about 19 journals in mathematics. Full-text access is available only to journals for which the Sawyer Library has a subscription, but there is no way of restricting your search to subscribed journals.

[JSTOR](#)

JSTOR is a scholarly archival database with about 19 mathematics titles including American mathematics journals going back to the late 19th century and the Philosophical Transactions of the Royal Society of London, including mathematics, going back to the 17th century. Publishers' moving walls may limit access to 3-5 years from the current date.

[MathSciNet](#)

Produced by the American Mathematical Society, MathSciNet is a comprehensive database of bibliographic information and reviews covering the world's mathematical literature since 1940. Includes "Reviews and Citations," from Mathematical Reviews/Current Mathematical publications. Links to original articles and documents are provided when available. MathSciNet includes linked reference lists from selected journals.

Selected Websites

[Scirus](#)

<http://www.scirus.com/>

Elsevier, a major scientific, technical, and health publisher, and producer of Scirus, claims that this website provides the "most comprehensive science ... search engine on the Internet." Scirus searches web pages, e.g., university and society websites, preprints on The Mathematics Preprint Server, and ScienceDirect journals. The web pages and preprints are freely available, as are full-text articles in a small number of ScienceDirect journals to which the Sawyer Library subscribes. But some of the links are to fee-based information, especially for journal articles. Includes Cornell University's Project Euclid covering serial literature in mathematics and statistics and about 8,600 articles from SIAM (the Society for Industrial and Applied Mathematics).

[Mathematics WWW Virtual Library](#)

<http://www.math.fsu.edu/Virtual/index.php>

This website is maintained by the Department of Mathematics, Florida State University. Information is categorized by subject. Topics include: Department Web Servers, Electronic Journals, Preprints, Software, Education, and over 900 links to Specialized Fields, among others. The site also has a search engine for keyword inquiries.

[Science.gov - Mathematics](#)

http://science.gov/browse/w_129B.htm

This gateway to mathematics information provided by U.S. Government agencies may be browsed alphabetically by website name or searched by keyword. For example, the link to [Math, Statistics, and Computational Science](#) leads to the section of the National Institute of Standards and Technology (NIST) website that provides links to NIST applied mathematics, statistics, and computational science resources such as [Guide to Available Mathematical Software \(GAMS\)](#), an index to mathematical and statistical software that is searchable by package name and the type of problem solved.

[Math2.org](#)

<http://www.math2.org/index.html>

Formerly called "Dave's Math Tables," this page is a handy source of math reference tables (available in English and Spanish) in areas such as general math, algebra, geometry, trig, linear algebra, discrete math, statistics, calculus, and advanced topics. An English-Spanish Math Dictionary and links to other websites are also available.

[How Many?](#)

<http://www.unc.edu/~rowlett/units/>

How Many? is a Dictionary of Units of Measurement. Written and maintained by Russ Rowlett of the University of North Carolina at Chapel Hill, it began as a collection of notes describing the relationship between various English and metric units, and grew from there. Besides the glossary, you will find an index of tables and scales (everything from hat sizes to shotgun gauges), and new measurement units from around the world.

[Martindale's Calculators On-Line Center: Mathematics](#)

<http://www.martindalecenter.com/Calculators2.html>

Part of an even [larger website](#) of calculators and online tools in all areas of the sciences, the Mathematics section includes slide rules, abacuses, and a great many complex math calculators by specialty (e.g., Logarithms, Prime Numbers, Differential Equations).

[The Math Forum](#)

<http://mathforum.org/>

Currently hosted by Drexel University, this is a wide-ranging and searchable website with content organized for children, teachers, university-level researchers, and parents. There is a "Math Tools" area with aids for teaching and learning math. There is an "Internet Mathematics Library" that is a well organized group of web links. And "Ask Dr. Math" offers a sizable Q&A archive of mathematical queries and responses. Be sure to also check out the allied website [MathDL: Mathematical Sciences Digital Library](#), an online resource managed by the Mathematical Association of America with funding by the National Science Foundation, and hosted by Math Forum.

[Mathematical Atlas](#)

<http://www.math-atlas.org/>

Although not exactly an atlas, this website provides "a collection of short articles designed to provide an introduction to the areas of modern mathematics and pointers to further information, as well as answers to some common (or not!) questions." You may browse through subject areas, do keyword searches, click on a territory of the "MathMap," or "tour the mathematical landscape." Maintained by Professor Dave Rusin of Northern Illinois University.

[MathWorld](#)

<http://mathworld.wolfram.com/>

This large, online encyclopedia created by astronomer Eric W. Weisstein and hosted by mathematics software developer Wolfram Research has a topics index, an alphabetical index, and a keyword search capability. The smaller print version of the information contained on this site, [CRC Concise Encyclopedia of Mathematics](#), is available in the Sawyer Library Reference collection.

[PRIME Mathematics Encyclopedia](#)

<http://www.mathacademy.com/pr/prime/index.asp>

The topics in the Platonic Realms Interactive Mathematics Encyclopedia (PRIME) may be browsed but not keyword searched. You may choose to limit topics by "level," e.g. "elementary level" entries are relevant to high-school and college mathematics.

[The MacTutor History of Mathematics Archive](#)

<http://www-history.mcs.st-and.ac.uk/history/>

Created by John J. O'Connor and Edmund F. Robertson of the School of Mathematics and Statistics, University of St. Andrews, Scotland, this site is a collection of articles on the history of math and biographies of mathematicians. It is searchable by name or time period and there is a

listing of women mathematicians. Topics include mathematics in various cultures (Indian, Arabic, Mayan, etc.), number theory, and mathematical education.

[Catalog of the Scientific Community in the 16th and 17th Centuries](#)

<http://galileo.rice.edu/lib/catalog.html>

This site has been compiled by Richard S. Westfall, Department of History and Philosophy of Science at Indiana University, and it is part of Rice University's Galileo Project. The site contains over 600 biographies on scientists of the 16th and 17th centuries, and approximately 25% of these biographies are devoted to mathematicians. The site may be searched, but not browsed.

[American Mathematical Society \(AMS\)](#)

<http://e-math.ams.org>

The website of the American Mathematical Society provides a comprehensive collection of mathematics information on the internet, in addition to providing information about and for members of the Mathematical Society. The site includes a guide to math links on the web, and links to math in the media and the news.

[Society for Industrial and Applied Mathematics \(SIAM\)](#)

<http://www.siam.org>

The SIAM website provides information about the organization, membership benefits, and SIAM-published journals, books, and conferences. You will also find a freely available selection of [Recently Posted Articles](#) from online SIAM journals.

Selected Electronic Reference Resources

[Concise Oxford Dictionary of Mathematics](#) 3rd ed.

Oxford Reference Online Premium 2005

A comprehensive resource of "over 3,000 entries," covering the entire field of mathematics, including pure and applied math, statistics, game theory, chaos, computing, and biographies of mathematicians. Compiled by Christopher Clapham, formerly of Aberdeen University, Scotland, and James Nicholson, formerly of Belfast Royal Academy, Ireland.

[Mathematics](#)

Gale Virtual Reference Library 2002

This MacMillan Reference encyclopedia is an illustrated 4 volume set that "explores the functions of math in daily life," and includes historical and biographical information.

[AccessScience](#)

McGraw-Hill 2000-2004

This is the *McGraw-Hill Encyclopedia of Science and Technology* online. The mathematics section includes links to "related web sites," biographies, and articles on topics such as algebra and number theory, logic and set theory, and topology. Topics can be searched by lists of categories or its search engine.

[Penguin Dictionary of Mathematics](#) 2nd ed.

Xreferplus 1998

In this comprehensive dictionary, over 3,200 entries can be found through its search engine or alphabetical listing. Covers all branches of mathematics and includes over 200 biographies. Edited by David Nelson, University of Manchester, England. Well illustrated with many "explanatory diagrams."

Selected Print Reference Resources

[Encyclopedic Dictionary of Mathematics](#) 2nd ed.

REF QA5 .N5 1977

This 2 volume set is an MIT Press translation of the major Japanese reference work *Iwanami Sugaku Ziten* from the Mathematical Society of Japan covering all fields of mathematics. Provides good, concise explanations as well as extensive articles on topics.

[Handbook of Mathematical Formulas and Integrals](#) 3rd ed.

REF QA47 .J38 2004

This is one of the more recently updated basic reference titles providing access to formulas, equations, tables, etc., for research in applied mathematics, engineering, and physics. Compiled by Alan Jeffrey and based on other major sources such as Gradshteyn and Ryzhik's *Table of Integrals, Series, and Products*.

[Handbook of Mathematical Tables and Formulas](#) 5th ed.

REF QA47 .B8 1972

This standard reference book of formulas used in mathematics, engineering, and other fields is divided into chapters on major "sectors" of mathematics. It was compiled by Richard Burington, former Chief Mathematician, Naval Air Systems Command, U.S. Navy Department.

[Mathematical Dictionary for Economics and Business Administration](#)

REF QA5 .S55 1976

A dictionary of over 2000 mathematical terms for economics and business, including operations research and finance. Appendices include a list of mathematical notations and the Greek alphabet.

[Mathematical Handbook for Scientists and Engineers](#)

REF QA40 .K598 2000

This compilation of "definitions, theorems, and formulas for reference and review" by Granino Korn and Theresa Korn is actually a Dover reprint of the 2nd McGraw-Hill edition published in 1968. It is still a basic source of information for all areas of mathematics and includes a section of extensive numerical tables.

[Notable Women in Mathematics](#)

REF QA28 .N68 1998

This Greenwood Press biographical dictionary, edited by Charlene Morrow, Mt. Holyoke College, and Teri Perl, co-founder of the Learning Co., profiles 59 prominent and lesser known women in the field from ancient through modern times, with a focus on 20th century academic women.

Basic CRC handbooks for mathematics include:

[CRC Concise Encyclopedia of Mathematics](#)

REF QA5 .W45 1999

See also the MathWorld website above.

[CRC Handbook of Mathematical Sciences](#) 6th ed.

REF QA47 .H324 1987

[CRC Handbook of Tables for Mathematics](#) 4th ed.

REF QA47 .W4 1970

[CRC Standard Mathematical Tables](#) 26th ed.

REF QA47 .C8 1981

[CRC Standard Mathematical Tables and Formulae](#) 31st ed.

REF QA47 .M315 2003