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News

## Mathematically fluent



Conditional probability, Fermat's Last Theorem, scalene triangle – if you have ever been stumped by mathematical jargon in an assignment or news report, you'll welcome a new online maths thesaurus to prompt your memory and put an expansive mathematics vocabulary at your fingertips.

Thesaurus.maths.org has over 4500 mathematical terms in English, between one and two thousand in each of Danish, Finnish, Hungarian, Lithuanian, Polish and Slovak, and the Spanish and German vocabularies growing daily. The project is an international collaboration led by Mike Pearson of the Millennium Mathematics Project (which also produces *Plus*) in the UK, and continues to grow, with hopes of other languages and more detailed definitions becoming available as suitable contributors are found. This multilingual mathematics thesaurus has just been made available online, together with a number of innovative tools that help make the language of mathematics easier to understand.



A conical helix – one of the many mathematical terms available

You can search for a mathematical term in any of the nine languages, and have the definitions in all the available levels (simpler to more complex) and languages appear in one page (you can set the site to display definitions in all the languages in Preferences). A search for probability gives definitions in English (probability), Finnish (todennäköisyys) and Hungarian (valószínűség), along with a list of broader, narrower and related terms. And this gives you the opportunity to be fluent in any of these languages, at least as far as web searching is concerned. From any of these definitions, you can search the affiliated websites for that language, say search for "probability" on *Plus* or "valószínűség" on KöMaL (a mathematics journal for Hungarian students), or search all of the web for the term in that language.

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Many of the definitions are illustrated with images, flash animations and 3D models, also gathered together in galleries which you can browse. You can also explore the thesaurus itself graphically, viewing your selected mathematical term and all those linked to it as a star-shaped network whose branches can be followed and expanded according to your interest.

Perhaps the most exciting thing about the new thesaurus is that you can take it with you wherever you go on the web. By dragging an m-button to your browser's toolbar, you can then use it to zap any web page you are reading. This will highlight all the mathematical terms in the page that appear in the thesaurus, and link them to their definitions. *Plus* has added this feature to our site – try out the *Highlight the maths in this page* link in the left margin on any of our articles or news stories.

So with the touch of an m-button, thesaurus.maths.org has given all of us access to a growing store of mathematical knowledge, making it a little bit easier to break through the mathematical language barrier that can separate us from understanding.

Rachel Thomas

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*Plus* is part of the family of activities in the Millennium Mathematics Project, which also includes the NRICH and MOTIVATE sites.