## Math resources on the web

Posted At: June 4, 2012 8:19 PM | Posted By: Michael Smith

Related Categories: Math

When I studied math there wasn't much about it on the internet. You had to go to a college for classes and to the library to read textbooks and papers. Now there are all kinds of math resources online. I think this lessens the need for universities and academic journals. When people can share and solve problems online, publish papers on their blog or arXiv and even put textbooks online then knowledge is liberated!

Here are some math resources that I have found useful and interesting:

- · Math articles and ebooks
  - wikipedia math <u>portal</u> and <u>categories</u>
  - wikiversity math <u>portal</u>
  - Free e-textbooks (search for math in the long list of subjects)
  - 79 online math textbooks
- Shared problem solving and archive of solved problems
  - Math Overflow (for serious students and researchers)
  - math.stackexchange.com (for everyone).
  - there are other stack exchanges for statistics, physics, Spanish and 80 more areas
- · Math papers
  - arXiv
- Math blogs and personal websites
  - Tim Gowers -
  - Terence Tao great discussion of topics, open problems and career advice
  - Tom Körner learning guides, lecture notes and more
  - Vicky Neale who blogged for everyone of her lectures with background notes and problems
  - Vi Hart super fun math videos and math music
- Course materials
  - Cambridge Pure math example sheets, lecture notes
    - (drill down into the staff person pages to see posted lecture notes)
  - MIT math lecture notes and example sheets. Some are full OCW Scholar courses that are designed for independent learners who have few additional resources available to them. These courses include exam solution notes, online study groups, video and simulations.
  - Open University OpenLearn free course materials on pure, applied and statistics
  - <u>Udacity</u> free video lectures, online tests and learning community mainly related to applied, applicable and computer science topics.
  - Free math video and audio courses
  - Indian professors' free <u>video lectures</u> along with Lecture Notes and references (Select "Mathematics" from the list of courses available).
  - Kahn Academy online courses, videos and interactive problems/tests
- Books
  - <u>Princeton Companion to Mathematics</u> an encyclopedic overview of pure math and some theorical physics with chapters on proof, many areas of math and biographies of famous mathematicians.