Bibliography : "When Will We Ever Use This?"

Internet Sources: **Scott Oliver soliver@d125.org**

https://education.ti.com/en/us/home

http://www.ticalc.org/pub/83plus/basic/math/geometry/

http://educationworld.com   **search for mathematics**

htto://ed.ted.com/series Ted Talks – look for Math in Real Life

http://www.math.harvard.edu/~knill/mathmovies/index.html

www.glasbergen.com   (cartoon)

www.piday.org/million/⤴   Million Digits of Pi

YouTube.com   : video clips from movies, TV ; Ellipsograph, ParabolaGraph

http://MathNexus.com   -- check the archives

http://mentalfloss.com/article/32288/11-great-geeky-math-tattoos

http://www.johnlangdon.net/   Ambigrams/Symmetry

http://www.scottkim.com   Symmetry

http://mathsci2.appstate.edu/~sjg/simpsonsmath/   Math from The

http://KenKen.com   Simpsons and Futurama

http://www.subzin.com/s/math "**math**" in 1152 movies and TV series

http://mathbits.com/MathBits/MathMovies/ResourceList.htm   Math in Movies

Wolfram Demonstrations Project (online)   with worksheets!!

http://harpers.org/blog/2013/08/nicholson-baker-argues-that-algebra-ii-shouldnt-be-a-required-course/

http://www.math.cornell.edu/~numb3rs/   Activities to Accompany Numb3rs

http://www.maa.org/community/columns/maa-found-math

Google: Math in__: Movies, TV, the real world, Math T-shirts, etc.

Books/Articles:

Adam, John A. , Mathematics in Nature, Modeling Patterns in the Natural World, Princeton University Press, 2003

Adam, John A., X in the City: Modeling Aspects of Urban Life, Princeton University Press, 2012

Baker, Nicholson, "Wrong Answer, The Case Against Algebra II", Harpers Magazine, Sept. 2013

Ball, Keith: Strange Curves, Counting Rabbits, and Other Mathematical Explorations, Princeton University Press, 2003.

Barrow, John D.: Mathletics : A Scientist Explains 100 Amazing Things about the World of Sports, WW Norton& Co., 2012

Behrends, Ehrends: Five Minute Mathematics, AMS, 2008

Berman, Bob: "Speaking the Language of the Cosmos",Astronomy, Dec 2013

Best Writing in Mathematics , 2010, 2011, 2012, 2013

COMAP: For All Practical Purposes – Introduction to Contemporary Mathematics, W.H. Freeman and Company, 1988
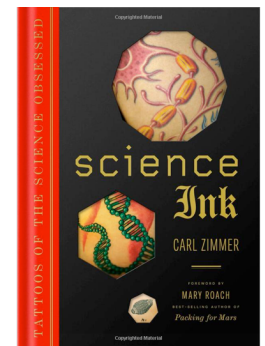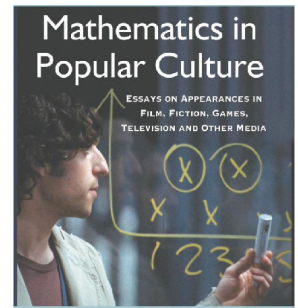
Dan Brown novels: The Davinci Code, Digital Fortress, Angels and Demons

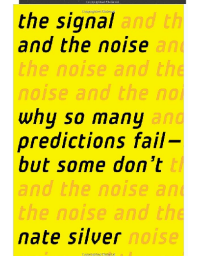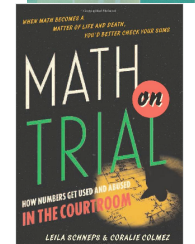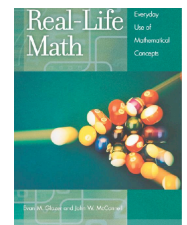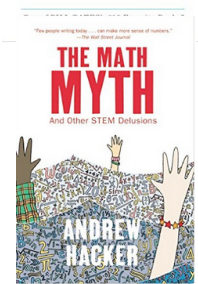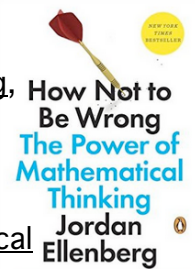Bryant, John & Sangwin: How Round is Your Circle? , Princeton University Press, 2008

Crato, Nuno: Figuring it Out, Entertaining Encounters with Everyday Math, Springer, 2010

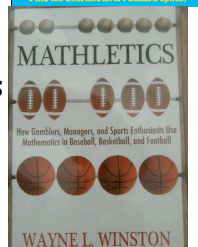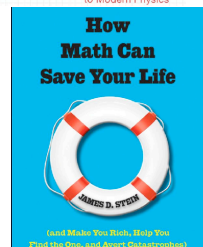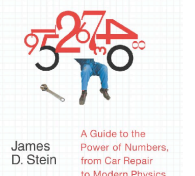Devlin, Keith & Lorden, Gary: The Numbers Behind Numbers, Plume Book, 2007

Discover Magazine, Jan/Feb 2013 , 100 Top Stories of 2013

Ellenberg, Jordan: <u>How Not To Be Wrong: The Power of Mathematical Thinking</u>, Penguin Press, 2014

Gardner, Martin: <u>Mathematical Carnival</u>, <u>The Last Recreations</u>, etc.

Gibilisco, Stan: <u>Technical Math Demystified</u>, McGraw Hill, 2006

Glazer, Evan and McConnell, John: <u>Real-Life Math: Everyday Use of Mathematical Concepts</u>, Greenwood Press, 2002

Hacker, Andrew: <u>The Math Myth and Other STEM Delusions</u>, Literary Ventures, Inc, 2016

House, Peggy, et al: <u>Mission Mathematics Grades 9-12</u>, NCTM Inc, 1996

Kolata, Gina, ed., <u>The New York Times Book of Mathematics, More Than 100 Years of Writing by the Numbers</u>, Sterling, 2013

Madden, Sean, "Parabolas Under Pressure", The Mathematics Teacher, Vol 102, no. 9, May 2009

Madden, Sean & Allison, Dean: "Pirates of the Parametric", The Mathematics Teacher, May 2011

Packel, Edward: <u>The Mathematics of Games and Gambling</u>, MAA, 2006

Paulos, John Allen books<u>: Innumeracy</u>, <u>Beyond Innumeracy</u>, <u>A Mathematician Reads the Newspapers</u>

Peterson, Ivars: <u>Fragments of Infinity: a Kaleidoscope of Math and Art</u>, John Wiley and Sons, 2001

Pickover, Clifford A. : <u>The Math Book</u>, Sterling Publishing Co. Inc, NY , 2009

Pickover, Clifford A. : "<u>A Passion for Mathematics</u>"

Santos, Aaron Ph.D. <u>How Many Licks? or How to Estimate Damn Near Everything</u>, , Running Press, 2009

Santos, Aaron : <u>Ballparking, Practical Math for Impractical Sports Questions</u>, Running Press, 2012

Schneps, Leila & Colmez, Coralie, <u>Math on Trial – How Numbers Get Used and Abused in the Courtroom</u>, Basic Books, 2013

Schoenborn, Barry: <u>Math for Real Life for Dummies</u>, John Wiley & Sons, 2013

Silver, Nate: <u>The Signal and the Noise</u>, Penguin Press, 2012

Singh, Simon: <u>The Simpsons and Their Mathematical Secrets</u>, Bloomsbury, 2013

Sinicrope, Rose & Bellittiere: "Ellipses and Orbits: Asteroids and Comets", NCTM Mathematics Teacher, Dec 2011/ Jan 2012

Sklar, Jessica and <u>Elizabeth: Mathematics in Popular Culture: Essays on Appearances in Film, Fiction, Games, Television and Other Media</u>,   McFarland & Co., 2012

Stein, James D., <u>How Math Explains the World, A Guide to the Power of Numbers, from Car Repair to Modern Physics</u>, Smithsonian Books, 2008

Stein, James D., <u>How Math can Save Your Life</u>, J Wiley & Sons, 2010

Stewart, Ian: <u>What Shape is a Snowflake? - Magical Numbers in Nature</u>, W.H. Freeman and Company, 2001

Strogatz, Steven: <u>The Joy of X, A Guided Tour of Math, From One to Infinity</u>, HMH, 2012

Weinstein, Lawrence and Adam, John: <u>Guestimation: Solving the World's Problems on the Back of a Cocktail Napkin,</u> Princeton University Press, 2008

Winston, Wayne L.: Mathletics: How Gamblers, Managers, and Sports Enthusiasts Use Mathematics in Baseball, Basketball, and Football, Princeton U Pr. ,2009
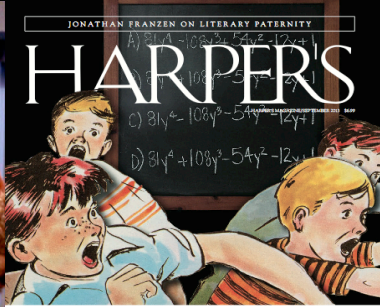
"When Will We Ever Use This?"

by Scott Oliver, AE Stevenson HS (retired)
soliver@d125.org

Can you solve this code?: (it is a Caesar cypher (shift of letters of alphabet))

YVILYA SHUNKVU HDVRL ZSVDSF. H ALSLWOVUL DHZ YPUNPUN PU
AOL KHYRULZZ - H APUUF, BUMHTPSPHY YPUN.
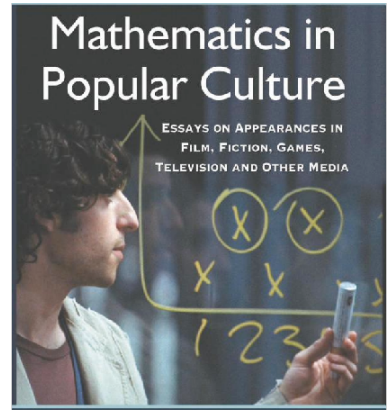
Or this one? (Caesar Square)

YCAUEARASESRASQE

Mathematics in Popular Culture

ESSAYS ON APPEARANCES IN FILM, FICTION, GAMES, TELEVISION AND OTHER MEDIA

How many movies/tv shows that contain references to math can you think of ?

WHEN MATH BECOMES A MATTER OF LIFE AND DEATH, YOU'D BETTER CHECK YOUR SUMS

MATH on TRIAL

HOW NUMBERS GET USED AND ABUSED IN THE COURTROOM

LEILA SCHNEPS & CORALIE COLMEZ

JONATHAN FRANZEN ON LITERARY PATERNITY

HARPER'S

WRONG ANSWER
The Case Against Algebra II
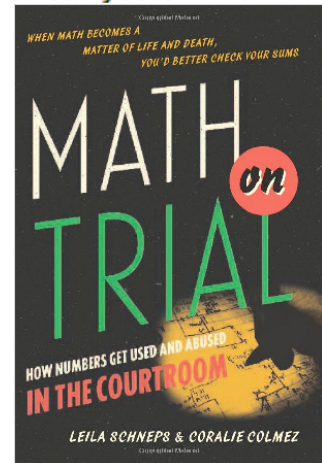By Nicholson Baker

LIFE AS A TERRORIST
Uncovering My FBI File
By William T. Vollmann

THE TWO DAVISES AND THE RUG
A story by Lydia Davis

Andrew Cockburn on why sanctions fail

	Perrins Sequence	
3	13	39
0	14	51
2	15	68
3	16	90
2	17	119
5	18	158
5	19	209
7	20	
10	21	
12	22	
17	23	
22	24	

Welcome to WhyDoMath

MONEYBALL

The Wizard of Oz

MICHAEL LEWIS
MONEYBALL
THE #1 NEW YORK TIMES BESTSELLER

Math in Real Life

← TedTalks

$$\frac{x}{6}^n + \frac{y}{3}^n < 1$$

n=2

science Ink

CARL ZIMMER

FOREWORD BY MARY ROACH
best-selling author of Packing for Mars

TATTOOS OF THE SCIENCE OBSESSED

Available at nctm.org
Ellipsograph --- YouTube.com

Can you solve the temple riddle? - Dennis E. Shasha

Can you solve "Einstein's Riddle"? - Dan Van der Vieren

Group theory 101: How to play a Rubik's Cube like a piano - Michael Staff

Can you solve the prisoner hat riddle? - Alex Gendler

The mathematical secrets of Pascal's triangle - Wajdi Mohamed Ratemi

Football physics: The "impossible" free kick - Erez Garty

The math behind Michael Jordan's legendary hang time - Andy Peterson

What's the difference between accuracy and precision? - Matt Anticole

Why are manhole covers round? - Marc Chamberlain
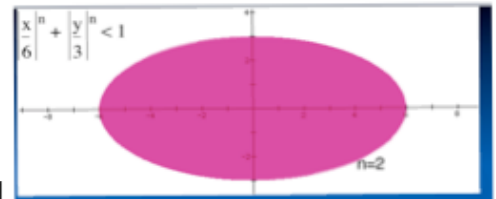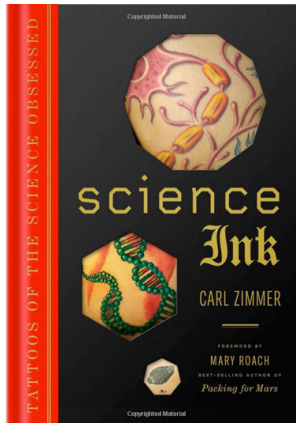
Sudoku puzzle grid:
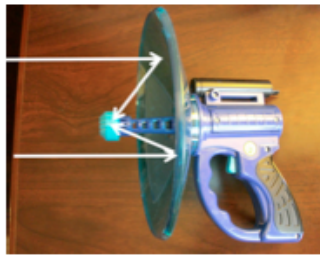
5	3			7				
6			1	9	5			
	9	8					6	
8				6				3
4			8		3			1
7				2				6
	6					2	8	
			4	1	9			5
				8			7	9

http://en.wikipedia.org/wiki/Sudoku
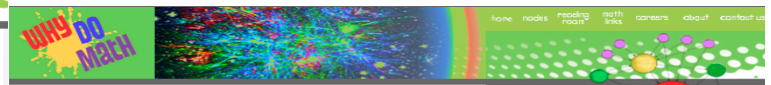
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Mathematical and computational analyses have proved to be uniquely insightful for solving a myriad of problems in science, society and our everyday lives. WhyDoMath highlights solutions to many of these problems in an engaging, layered, multimedia website and shows that an undergraduate mathematics education can be an entryway to rewarding and engaging career opportunities.

America's Cup — Alfio Quarteroni	Cochlear Implant — Joseph Skufca	Google PageRank — Emmeline Aghapour, Timothy P. Chartier, Amy N. Langville, and Kathryn E. Pedings	Neuroscience Mathematics — Brent Doiron, Eric Shea-Brown
Space Travel — Shane Ross	Tomography — Chris Budd and Cathryn Mitchell	Voting — Michael A. Jones	Wavelets — Patrick J. Van Fleet

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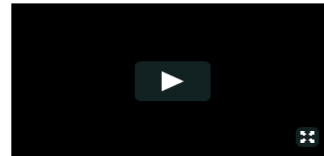
Reading Room Feature Article:

Mining Multilingual Documents, Dianne P. O'Leary and John M. Conroy, SIAM News, September 2008

Home / Google PageRank

Google PageRank:
The Mathematics of Google

By Emmeline Aghapour, Timothy P. Chartier, Amy N. Langville, and Kathryn E. Pedings

Segment 1: "Introduction to Google's PageRank algorithm" from "The Random Surfer" by Tim Chartier on Vimeo.

What do you do when you want to find a restaurant in your area? Or when you need a boost on a homework question? Or if you want to research a new place you'll be visiting? You turn to your favorite Internet search engine, of course. Have you ever wondered how search engines actually retrieve the web documents you need? The answer is mathematics. These days we take search engines for granted, but there is a lot going on behind the scenes each time you enter a search query into your favorite search engine.

The role search engines play in organizing the massive amount of information on the gigantic World Wide Web is fundamental. The

In This Section
- PageRank Home
- Life without Search Engines
- The Mathematics of Google
- Exploring PageRank
- Dangling Nodes and Cycles
- The Solution of Teleportation
- Google and Censorship
- Google and Word Order
- Other Famous Rankings
- The Diminishing Value of Hyperlinks
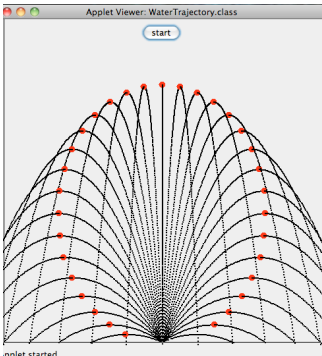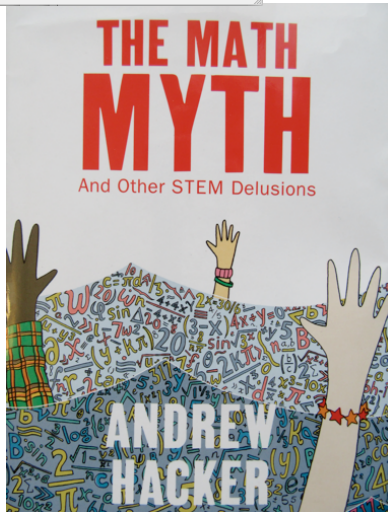- People Involved
- References and Links

Applet Viewer: WaterTrajectory.class
start

Applet started.

MAA Found Math 2012 - Week 43

Like 7 people like this. Sign Up to see what your friends like.

$$4\sum_{k=1}^{\infty} \frac{(-1)^{k+1}}{2k-1}$$

MAA Found Math: "Pumpkin pi" carved by Nathan Shields for our Mathematical Pumpkins contest. Did you use math to decorate your pumpkin this year? Send photos to editor@maa.org and we'll add them to our gallery.

THE MATH MYTH
And Other STEM Delusions
ANDREW HACKER

KenKen puzzle (left):

1	9+	30×	
6+		2−	8×
			2÷
60×			2−
2−		4−	

KenKen puzzle (right):

1−		1	1−	180×	
60×	2÷			2÷	
	9+				10+
	1−	15+			
5+		13+		2−	
	11+				