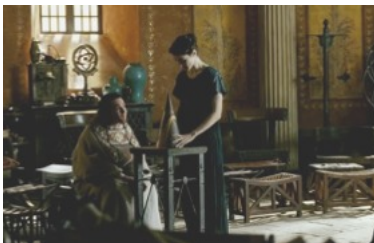# Mathematics in Movies

This is a collection of movie clips in which Mathematics appears. The site has been changed in 2010 to HTML5 video so that it is accessible by all devices. There is always also a direct video links. It can be include a clip into a presentation, chose the quicktime version. (Media RSS link). Since the format which was chosen in 2006 were small scale movies (bandwidth was still an issue at that time), the movies are now added as separate pages for various additional movie clips, which is easier to maintain an extend than an ever growing database and allows on each page also to adapt the quality of the movie and to include additional content.

- Just before I go
- Treasure Sierra Madre
- End animation in annihilation
- Answer to ultimate question: 42
- Eigenvalues of Moebius strip
- Scrumtrulescent
- The number 73
- 3D printing in Ocean 8
- Time machine blackboards
- Rubik Cube fighting back
- Logic in "Catch 22"
- Relativity in "Interstellar"

- The Areonauts
- Measuring Poetry
- Eigenmodes in Red Violin
- Math in Dr Zhivago movie
- Sum of arithmetic series
- Physics in "Theory of Everything"
- Monkey theorem in "After the Dark"
- Fermat's room
- Chaos in "Chaos theory"
- Number theory in "The man who knew infinity"
- Geometry in "Suicide Squad"

- The physician
- Counting to 13"
- Math class in "Better off Dead"
- Counting in "Clan of the Cave Bear"
- Calc and Lin Alg in the ``Thinning"
- Hidden Figures
- Trachtenberg method in "Gifted"
- Percentages in "Guardians of the Galaxy"
- Addition in "The Warmachine"
- Entropy in "Arrival"
- Graph theory in "Goodwill Hunting"

Agora (Appollonian cones) [IMDb link]
Hypatia and her Apollonian Cones.
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Agora (Relative motion experiment) [IMDb link]
Hypatia makes an experiment with relative motion
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Agora (Solar system) [IMDb link]
A student presents the Ptolemaic system with epicycles (Thanks to Sheldon Ross and Li Zhou for the suggestion)
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Calculus of Love [IMDb link]
An obsession with the Goldbach conjecture (the film has a surprising ending and can be seen here)
2011
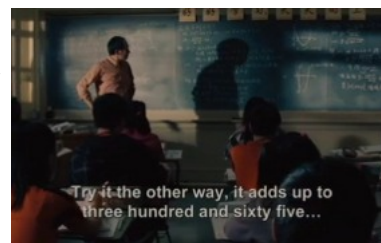To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Lambada [IMDb link]
Kevin Laird, a Beverly Hills school teacher talks about complementary angles, the most useful angle, the identity $\cos(x)^2 + \sin(x)^2 = 1$ and the Cartesian coordinate system. (Thanks to Aleksandra Ravas for the suggestion).
1990
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Safe [IMDb link]
A young girl with super memory and extraordinary math talent gets hunted by various mafia like gangsters. (Thanks to Tracy Leah for the suggestion).
2012
To the movie. Direct media links: Quicktime MP4,

Lincoln [IMDb link]

Euclids notion: things are equal to a common thing are equal to each other. (Thanks to Andy Ventress for the suggestion).

2012

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Equilibrium [IMDb link]

About the probability distribution for gun cutters

2002

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Person of Interest [IMDb link]

Finch as a substitute teacher talks about the digits of pi. He gives an answer to the question "When are we ever going to use this?" (Thanks to Joanne Crooks)

2011

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Rushmore [IMDb link]

Max Fischer (Jason Schwartzman) daydreams on solving the "hardest geometry equation in the world: "Computing the area of an ellipse (Thanks to Helen Chandler and Aaron Snitzer for the suggestion).

1998

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The double [IMDb link]

A statistics lesson on hypothesis and p-value (Thanks to Jennifer Harris for the suggestion).

2011

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The names of Love [IMDb link]

A math class with some integrals appear

2010

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.
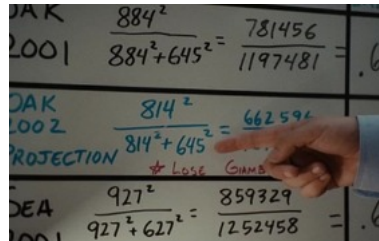
Real Genius [IMDb link]

Some math classes with calculus appear. Firsti power series, then Bessel functions (with reduced audience) Thanks to Kelli DeMoville and Patrick Downs for the suggestion.

1985

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Moneyball [IMDb link]

Using equations and statistics, baseball players are analyzed by Peter Brand. People are overlooked because of a variety of reasons: age, appearance, personality. Mathematics cuts right through this bias.

2011

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Ring [IMDb link]

A sign on a mathematicians blackboard is changed, producing some headache later on, shortly before the mathematician dies (the theme of this horror movie is that people die after they watch a specific tape and then get a phone call). (thanks to an anonymous tipster).

1998

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Last Enemy [IMDb link]

The theorem discussed is actually the Poincare conjecture which had been proved by Perelman (thanks to Robin Zaruba for the suggestion)

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Full Monty [IMDb link]

What is 10 times 1000?

1997

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Hackers [IMDb link]

Some mathematical formulas in a visualization of a "worm". Features a young Angelina Jolie and a good ol hexeditor which had already been useful to me on the Atari ST to "edit games".

1995

Jane Eyre [IMDb link]

Some arithmetic problems on the blackboard, mostly with wrong solutions.

1996

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Intacto [IMDb link]

What is the chance to draw an ace in a randomly shuffled card deck of 52. There is one chance in a million for a plane to crash and for it to crash, leaving you the only survivor out of how many -- 237 passengers? One chance in 237 million. Later in this convoluted thriller, a Russian Roulette variant appears, where 5 of 6 chambers contain bullets.

2001

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Network [IMDb link]

Arthur Jenson (played by Ned Beatty) talks to Howard Beale (played by Peter Finch) about the only primal force of nature: money: "What do you think the Russians talk about? Karl Max? They get out their linear programming charts, statistical decision theories, mini-max solutions and compute the prize-cost probabilities of their transactions and investments. Just like we do. "

1976

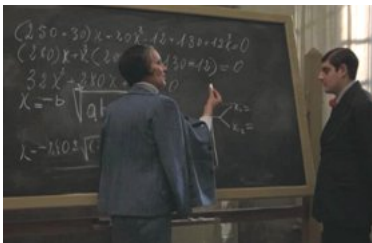To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

12 Monkeys [IMDb link]

A wonderful performance of Brad Pit. Here he talks about predicting the future with a probability matrix. As expected with time travel stories, the storyline of 12 Monkeys is intriguing.

1995

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Amarcord [IMDb link]

Solving the quadratic equation. A math scene in this Fellini movie is part of a larger selection of delightful school scenes.

1973

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

TSLauhe Maltese Falcon [IMDb link]

Lots of meta talk and meta-meta talk and twisted logic in this conservation about the black bird. The statement "Mathematically correct" flagged the movie clip for this collection [I added the last remark to add a meta statement about this caption]

1941

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Suspect X (IV) [IMDb link]

The two friends talk about math, the four color theorem and the 7 Clay math problems. (Thanks to Li Zhou for the suggestion)

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Suspect X (III) [IMDb link]

The end of a calculus class by Shigami.

2008

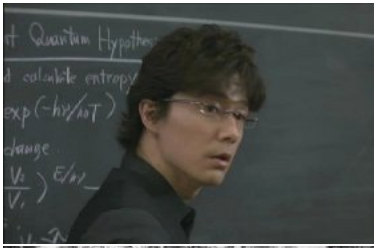To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Suspect X (II) [IMDb link]

A physics class by Yukawa on quantum mechanics.

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Suspect X (I) [IMDb link]

The Gaussian Acceleration device appears early in this Japanese thriller. The entire movie is math/physics heavy since Yukawa is a physisist and

Shigami is a mathematician.
2008
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Dam Busters [IMDb link]
On the use of Congruent triangles to measure distances. Also some applied math problems on bouncing balls on water and detonations in water. Thanks to Craig Smorynski for the suggestion.
1955
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Ice Storm [IMDb link]
Its when they say 2*2 is equal to 4, it is not numbers, it is space. It is perfect space. But only in your mind. You can not draw perfect squares in the material world. [While this movie scene is harmless, the movie itself is definitely not PG13.]
1997
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Flipped [IMDb link]
The area of a rhomboid. The movie clip of this beautiful love story starts a bit earlier, in order to explain why Juli Baker is so absent minded in school.
2010
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Bank [IMDb link]
The multiplication table and the compound interest formula.
2005
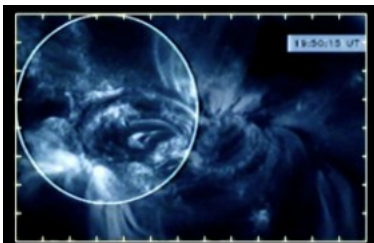To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Cranford [IMDb link]
On addition of income numbers and a sentence on teaching mathematics or geography. [As all BBC drama, this miniseries contains delightful acting and is built on a wonderful script quite freely using Elizabeth Glaskells original text.]
2007
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Wild Blue Yonder [IMDb link]
Chaotic transport in the solar system. [Actual documentary footage and interviews are combined to a movie. The interview is real and serious but the context makes it funny.] Thanks to Martin Lo to mention this to me. Lo appeared with two other mathematicians in this movie.
2005
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.
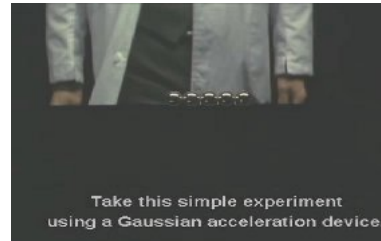

The Wild Blue Yonder [IMDb link]
Rotating system. [Actual documentary footage and interviews are combined to a movie. The interview is real, the context makes it funny.]
2005
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The killer inside me [IMDb link]
A brief moment sanity in this dark, dark movie when Lou solves some integrals. It is an extremely disturbing movie because the dark side of Lou Ford, the psychotic killer, is not visible. Why the police men Lou does some math in this scene is unexplained in the movie.
2010
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.
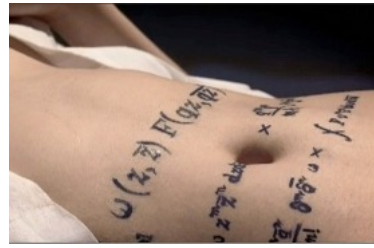
Deskset [IMDb link]
The roof scene of this charming Tracy/Hepburn movie features some "mathematical" questions. (Thanks to

Rites of Love and Math

Shawn Jones for the suggestion.)
1957
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

[IMDb link]

In this **movie** of Edward Frenkel mathematical formulas are written onto skin. (Thanks to Andrew Ranicki for the suggestion).
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Artificial Intellgience: AI [IMDb link]

About the fabric of space time and how humans have tried to find the meaning of life in art, poetry or mathematical formulas.
2001
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Drowning by Numbers [IMDb link]

Counting the **sta**rs. Once you counted the hundred, all the other are the same. (Thanks to Andrew Ranicki for the suggestion).
1988
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

In July [IMDb link]

Theoretical and applied computation of a free fall problem (Thanks to Andrew Ranicki for the suggestion)
2000
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Knack ... and How to Get It [IMDb link]

The angle of incidence is equal to the angle or reflection (Thanks to Andrew Ranicki for the suggestion)
1965
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Rain Man [IMDb link]

3*82=246 = 250-4 (Thanks to Joia Felice for the suggestion)
1988
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

A Serious Man [IMDb link]

The Uncertainty Principle in Quantum Mechanics. The entire movie is a celebration of this principle **sta**rting with the dead/alive cat scene, unsharp boundaries singing and TV receiption, accepting mysteries, culture clashs, quantum tunneling between relationships etc,etc. One of the best Cohen brother movies. P.S. Can you spot the error in the blackboard computation in this scene? The computation error probably has been implemented also by purpose on a meta level.
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Three O'Clock High [IMDb link]

Some algebra problems are visible in a quiz. To determine who cheated, buddy has to solve 2 blackboard problems on square roots.
1987
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

G.I. Joe - Rise of the Cobra [IMDb link]

The shadow determines the lattitude where the picture was taken. Compare the idea of Eratostenes to measure the shadows of a stick on different locations to get the radius of

the earth. Thanks to Robin Zaruba.
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Hangover [IMDb link]

Mathematical thoughts of Allen, when winning at Vegas: from simple arithmetics to Fourier theory. How many formulas can you identify?
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Time Machine [IMDb link]

Mathematical work on a black board.
2002
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Breaking the code [IMDb link]

The enigma and its complexity appears in this movie about Alan Turing. Thanks to the university of Arizona movie club, where I had seen and learned about it.
1996
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Star trek [IMDb link]

Young Spock learns Math. He memorizes the formula $(4pi/3)$ r^3 for the volume of the sphere, the square root of 2396324 and the definition of dimensionality $\log(n)/\log(d)$.
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Star trek The Next generation [IMDb link]

Barclay becomes a genius and argues Grand Unification Theory with Albert Einstein (Thanks to Jason Baumgartner for the suggestion)
2002
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Star trek The Next generation [IMDb link]

Probably the most hilarious **sta**tement about dimension in the galaxy appears in the episode "Where silence has Lease": "Is the lack of a dimension a dimension by itself?" Negative dimension. Mathematicians have not yet come up with this idea, but mathematicians have used also some time to come up with negative numbers.
2002
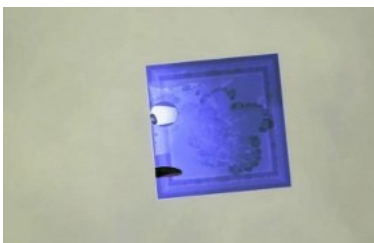To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Night at the Museum II [IMDb link]

What number is at the heart of a Pyramide? Pi=3.1415926 ... (Thanks to Susan Milano for the suggestion)
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

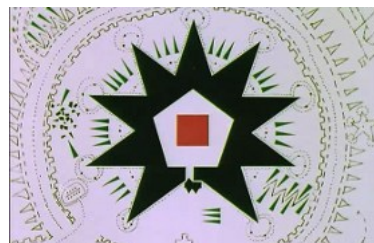### Up in the air [IMDb link]

Ryan and Natalie have a candid conversation about numbers, frequent flyer milages mostly, "the miles are the goal" but "Pi is just a number" comes up too.
2009
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Flatland: The movie [IMDb link]

Spherius shows Arthur the third dimension
2007
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Flatland (short) [IMDb link]

The sphere shows the third dimension.
This **movie** was done at the animation workshop at the Carpenter Center for the Visual Arts at Harvard University. A production based on an idea by the American animator

1965
To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

The Pink Panther Strikes Again [IMDb link]

Torture: finger nails on a blackboard filled with wrong mathematical computations like 3x3=7.

1976

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

Parenthood [IMDb link]

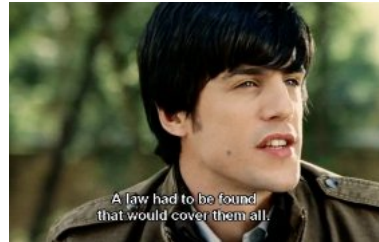In this commedy with Steve Martin, a kid takes the square root of a large number.

1989

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

Bedazzled (2000) [IMDb link]

The devil first assigns Fermats theorem but then cancels all homework. (Thanks to Tyson Liskow for the suggestion).

2000

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

Fermat's room [IMDb link]

This brilliant movie is essentially about math only. A few famous math puzzles appear in this movie, where 4 mathematicians are trapped in a room where the walls slowly crush them. (Thanks to Evan Pellnitz for the suggestion).<u>more</u>.

2007

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

Phantom Tollbooth [IMDb link]

The dodecahedron asks some riddles to get to Digitopolis. Fibonnacci series, vectors and scalars, equivalence relations and 4827659 hairs. (Thanks to Ron Fisher for the suggestion)

1970

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

Pay it forward [IMDb link]

Powers of three in a good pyramid scheme: select 3 people to do good things for and then those 3 each select 3 more people, etc (Thanks to Carolyn Seubert for the suggestion).

2000

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

For a few dollars more [IMDb link]

Counting dead gangsters. (Thanks to Damien Brown for the suggestion).

1965

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

Smilla's Sense of Snow [IMDb link]

Smilla reads from Euclids book to Isaiah. (Thanks to Steen Grode for the suggestion)

1997

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

Reality Bites [IMDb link]

About the Math in Astronomy

1994

To the <u>movie</u>. Direct media links: <u>Quicktime MP4</u>, <u>Webm</u> and <u>Ogg Vorbis</u>.

Smilla's Sense of Snow [IMDb link]

Natural numbers, negative integers, fractions. An IMDB review quote: The absolute highlight of the movie is a little speech Smilla gives about numbers. (Thanks to Steen

Merry Andrew [IMDb link]

In this musical comedy, Danny Kaye as Merry Andrew teaches Newton's law, geodesics and Pythagoras (Thanks to Virginia Usnick for the suggestion)

1958

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Butterfly Dreaming [IMDb link]

On the probability that two raindrops hit the same leaf. (Thanks to Susan Milano for the suggestion and to Robert and Anna Pollack, and the movie director Rufus Williams to make the movie available).

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.
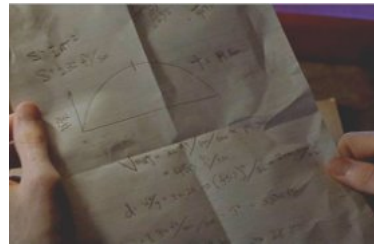

The Oxford Murders [IMDb link]

Lecture on Wittgensteins pessimistic view on absolute truth followed by rather shallow sound bites: the beauty and harmony of numbers, the golden ratio, Fibonnacci, snowflakes and cancer, the secret meaning of numbers, the butterfly which flaps its wings to produce a hurricane which nobody can predict, logic and chance. Thanks to Detlev Beutner for the suggestion.

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

October Sky [IMDb link]

Free fall differential equations as used in rocketry.

1999

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Little Big Man [IMDb link]

A lier dilemma leads to the defeat of general Coster at the battle of big horn (Thanks to Virginia Usnick for the suggestion).

1970

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Run Lola Run [IMDb link]

Beside the main theme of "sensitive dependence on initial conditions", there is a "run of Lola" in which she wins in roulette twice betting on the same number 20. The first time, the initial input of 100 mark is multiplied by 35. The second bet multiplies the now 3600 by 35 leading to a total win of 3500+126'000 = 129'500 has an element of Grass's Blechtrommel cry, mathematically related to "resonance". (Thanks to Mark-Willem Dogterom).

1998

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Its a Mad,mad world [IMDb link]

Some division problems appear in this oscar winning comedy when eight motorists try to figure out how to split the not yet found treasure. (Thanks to Pete Swartz for the suggestion)

1963

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

A walk to remember [IMDb link]

A tutoring scene with equilateral and isosceles triangles. (Thanks to R. Star Behar for the suggestion)

2002

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Old School [IMDb link]

This comedy not only shows shots of Harvard college but also some rather tough math test problems: like Harriot's method of solving cubics (named after Thomas Harriot, you find **Harriot's method** for finding the three solutions $x=e-b^2/e, e, b^2/e$ of the equation $x^3+3\ b^2\ x = 2\ c^3$ here). Also Diophantine equations or integration problems appear in this test.

2003

Last year in Marienbad [IMDb link]

In this rather enigmatic movie, the enigmatic game of NIM with a 7-5-3-1 initial condition is played twice. (Thanks to John

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Shrek the Third [IMDb link]
Mathematical logic in sentences

2007

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Apocalypse Now [IMDb link]
Surrounded by horror, forms of poetry, physics and math appear in a mad form too. Photojournalist: "this is dialectics, simple dialectics. It is very simple dialectics: 1 through 9, no maybes, no supposes, no fractions. You can't travel to space. You can not go to space with fractions. What do you land on: on one quarter or 3/8th? What do you do when you go to venus or something. Thats dialectic. Physics. Dialectic logic is: there is only love or hate."

1979

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Alice in Wonderland [IMDb link]
Riddle: Why is a raven like a writing desk? Carols own answer given in 1896: Because it can produce a few notes, tho they are very flat; and it is **nevar** put with the wrong end in front! (Thanks to Tania Moloney for the suggestion.)

1951

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

National Treasure [IMDb link]
Cracking a password by knowing the letters used.

2004

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The wizard of oz [IMDb link]
The scare crow theorem: in an isoscele triangle, the sum of the square roots of two sides is the square root of the third side. (Thanks to Wyley Beatty to suggest this movie).

1939

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Boller for the suggestion.)

1961

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Happening [IMDb link]
During one of the "happenings", Julian tries to divert the attention to a math problem.

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

How green was my valley [IMDb link]
A 100 gallon bath tub is filled from A with 20 gal/min and from B with 10 gal/min and leaks 5 gal/min. How long until it fills? Thanks to Orlando Figueiredo for the suggestion.

1941

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Alice in Wonderland [IMDb link]
Fooling around with complements. The unbirthday. Its a small world, most people share an unbirthday. Carol might have been inspired by the birthday paradox: in a class of 23 the chance to have two kids with the same birthday is already more than 1/2. (Thanks to Tania Moloney for the suggestion).

1951

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

National Treasure Code [IMDb link]
The Ottendorf Cipher, a book Cipher.

2004

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The number 23 [IMDb link]
Numerology with the number 23

2007

To the movie. Direct media links: Quicktime MP4,

23 [IMDb link]

A true story about German Hackers/Spies. Numerology as in the movie "The number 23". Bach as a hacker composing palindromic music. (Thanks to Frank Josellis for the suggestion).

1998

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Antonia's Line [IMDb link]

An algebraic topology class. (Thanks to Mark Barsamian for the suggestion).

1995

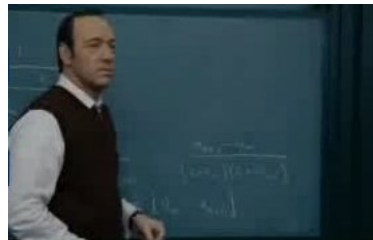To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

21 [IMDb link]

The Newton method

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

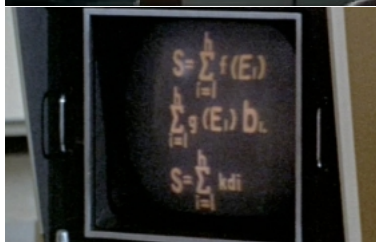### 21 [IMDb link]

Cauchy plagiarism?

2008

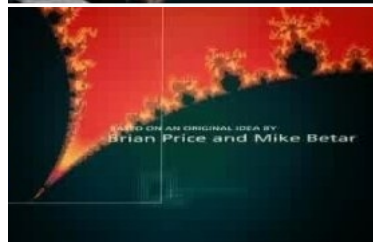To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Collossus: The Forbin Project [IMDb link]

The mighty US defense computer "Colossus" develops calculus to communicate with its buddy in the Soviet union. (Thanks to website visitor "Bob" to suggest this.)

1970

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The bank [IMDb link]

Predicting the stock market using complex dynamics.

2001

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Little Big League [IMDb link]

Joe can paint the house in a=5 hours, Sam can paint the house in b=3 hours. How much time do they need if the paint it together?

1994

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Screensaver: Office: Season 4 Episode 5/6 [IMDb link]

The screensaver is a billiard. It implements a linear equation $a x = c \mod n$, the simplest case of the Chinese reminder theorem.

2007

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

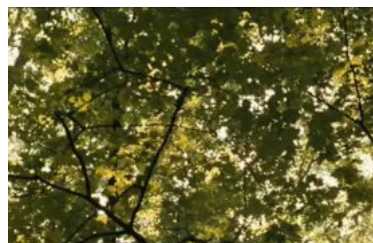### The Office: Season 5 Episode 9 [IMDb link]

Explaining a surplus to a 5 year old.

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Revolutionary Road [IMDb link]

A mathematician appears in this though provoking movie.

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Harold and Kumar [IMDb link]

Solving an integration problem in calculus

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Harold and Kumar [IMDb link]

A poem about the number square root of 3. (Thanks to Yelena Melnichenko for pointing out that math scene).

2008

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Back to the Future Part III [IMDb link]

Dok Brown: Clara was one in a million, one in a billion, one in a googolplex.

1990

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Once upon a time in the west [IMDb link]

Counting horses

1968

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Once upon a time in the west [IMDb link]
Thousands of Thousands. One calls them Millions
1968
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Jane Eyre (I) [IMDb link]
Some glimpses of mathematics appear in the BBC drama: Jane Eyre tutors fractions to Adele who is later very excited about the carriage.
2006
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Jane Eyre (II) [IMDb link]
An other glimpses of mathematics appear in the BBC drama: Jane Eyre grades a fraction assignment of Adele and is interrupted by Grace Pool.
2006
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

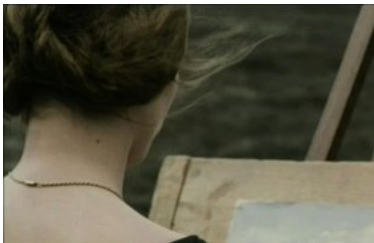### Jane Eyre (III) [IMDb link]
An other glimpses of mathematics: a happy carriage scene, Rochester imagines Jane teaching mathematics.
2006
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Tenant of Wildfell Hall [IMDb link]
A glimpse of geometry in painting?
1996
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Mansfield Park [IMDb link]
Reciting a scene with Fanny, Edmund and Mary, mentioning the teaching of mathematics. As frequently done by Jane Austen, the scene is also a play in a play where the dialog refers to the actual situation. An other most delightful example (not displayed in this clip) is the library scene when Sir Thomas unexpectedly comes home from Antigua.
1996
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The prophecy [IMDb link]
Simon: "See you kids. Study math. Its the key to the universe". (thanks to Bret Benesh for the suggestion).
1995
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Father of the bride [IMDb link]
How to get 8 hotdogs and 8 hotdog buns if hotdog buns are bundled in 12. (Thanks to website visitor Renee Pentecost to suggest this).
1991
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Mean Girls [IMDb link]
A scene showing a Highschool calculus class. (thanks to website visitor Lillian Tubbs to suggest this.)
2004
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Mean Girls [IMDb link]
A scene showing a calculus contest in which a system of linear equations as well as a limit problem appears

(thanks to website visitor Lillian Tubbs to suggest this.)

2004

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

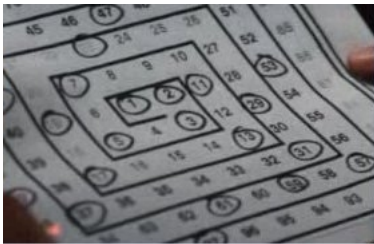### The Clan of the Cave Bear [IMDb link]

Teaching of mathematics at the time of the Neanderthals maybe 100'000 years ago.

1986

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Bedazzled (1967) [IMDb link]

The lier's paradox in this Faustian comedy in which Elliot sold his soul to have 7 wishes fulfilled.

1967

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The code conspiracy [IMDb link]

The ulam prime spiral appears. One could overlook that almost nothing connected with codes, physics or math does make sense in this movie, but that the blue picture of the Ulam spiral is fake is slightly annoying.

2001

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

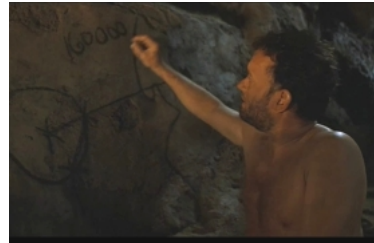### The island [IMDb link]

Discovering a deterministic system for the lottery on the island.

2005

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Good Neighbors, episode 1.1 [IMDb link]

Tom Goods remembers to use Algebra to solve things. Introduce x as the unknown.

1975

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Cast Away [IMDb link]

First scene: Lecture on search area on a rock. Second scene: the path of the sun on the rock used as a calendar.

2000

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Eleventh hour: Kryptos [IMDb link]

Ian Hood, the special scientific troubleshooter for the British government has to solve a riddle from a friend. (Thanks to Robin Zaruba for the suggestion)

2006

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Marius [IMDb link]

Bartender Cesar lectures Marius on mixing a picon-citron-curacao: one very small third of curacao, one third of citron, then a large third of picon. And to finish, a large third of water. (Movie suggested by Billy Carson)

1931

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Croupier [IMDb link]

About the odds in poker.

1998

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Ma and Pa Kettle [IMDb link]

Different proofs that $25/5 = 14$

1949

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Cube [IMDb link]

People are trapped in a giant cube puzzle. A permutation riddle has to be solved.

1997

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

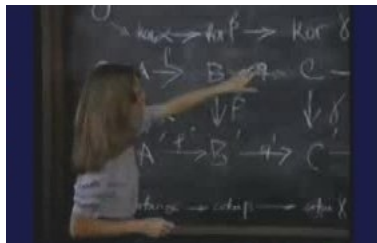### Hypercube [IMDb link]

People are trapped in a hypercube which implodes at the end. Also time is mixed up in this cube.

2002

To the movie. Direct media links:

Its My Turn [IMDb link]
A lecture on the Snake lemma in homological algebra in which a student pretends to know things better.
1980
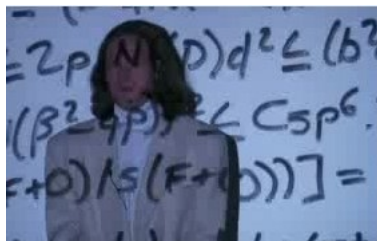To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Simpsons treehouse of horror VI [IMDb link]
Homer enters a 3D world with different mathematical topics.
1995
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Sneakers [IMDb link]
A lecture on computational number theory. A method superior to the number field sieve is announced
1992
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Enigma [IMDb link]
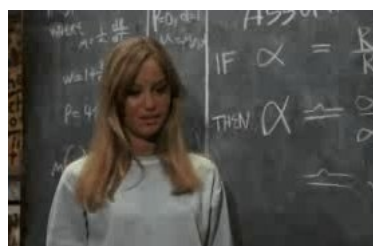About cracking "Shark" a refinement of the Enigma code.
1991
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Simpsons First Season dvd2 [IMDb link]
Bart Simpson solves a math problem at the learning center.
1989
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Straw Dogs [IMDb link]
A blackboard with mathematical astrophysical formulas.
1971
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

P.S. [IMDb link]
A blackboard in Columbia University with mathematical formulas written by astrophysisist Peter, the ex-husband of the main character Louise
2004
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Stand and Deliver [IMDb link]
Starting a difficult lecture.
1988
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Stand and Deliver, TicTacToe [IMDb link]
Drop out student learns calculus. TicTacToe method for integration by parts. (Thanks to Matt Leingang for the suggestion)
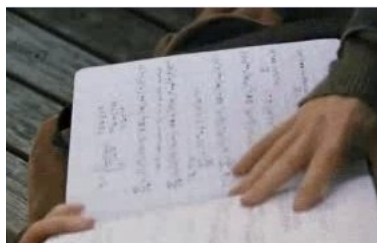1988
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Stand and Deliver, Giggolo [IMDb link]
The giggolo problem.
1988
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Proof [IMDb link]
Work on the Riemann hypothesis
2005
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Hitchhikers Guide to the Galaxy [IMDb link]
The number 42
2005
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Abbott and Costello: In the navy [IMDb link]
Abbott and Costello do a Calculation trick to show that 7*13 = 28
1941
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Pi [IMDb link]
Numerology, mathematics is everywhere.
1998
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.
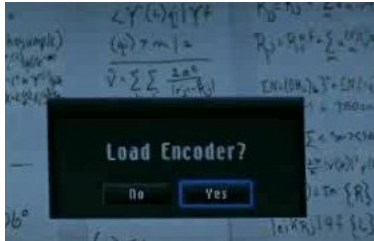
Monty Python's flying circus [IMDb link]
Football game, the mathematicians Leibniz on the german team, Archimedes on the greek team.
2005

Monty Python flying circus 2/29 [IMDb link]
Rhetorics and Logic

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

have a lot of common. The art of arguing. What is an argument?
2005
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Saint [IMDb link]
Piece of paper with mathematical formulas for cold fusion.
1997
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Indiana Jones and the Raiders of the Lost Ark [IMDb link]
Blackboard with some physics formulas
1981
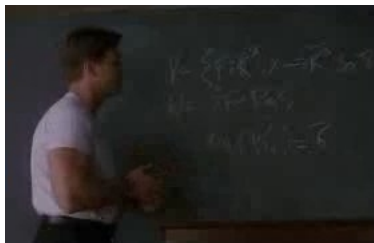To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Good Will Hunting, Cayley formula [IMDb link]
Will Hunting writes down Cayley's formula **sta**ting that the number of labeled trees on n nodes is n^{n-2}. Then lists 8 different unlabeled trees with 10 nodes. (Thanks to George Lowe for the suggestion)
1997
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Good Will Hunting [IMDb link]
A Blackboard in linear algebra lecture at MIT on Parseval's identity in Fourier theory.
1997
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

A Beautiful Mind [IMDb link]
Multivariable calculus lecture
2001
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Dimensions [IMDb link]
An educational movie by Jos Leys Etienne Ghys and Aurelien Alvarez (Thanks to Pedram Safari for suggesting this)
2008
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Donald in Mathmagicland [IMDb link]
Donald learns the Math of Billiards. It is a pretty good example, where reflections appear. The mathematics of billiards in a rectangle is already interesting and leads to questions in and basic Diophantine number theory appears because for most angles the billiard shots are not closed. The **DVD can be obtained here**.
1959
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Mirror has two Faces [IMDb link]
Calculus lecture but the actors mumble about prime twins.
1996
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Infinity [IMDb link]
Abakus scene and explanation how to compute the third roots
1996
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Jurassic park [IMDb link]
Chaos theory I
1993
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Jurassic park [IMDb link]
Chaos theory II
1993
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Contact [IMDb link]
Information is encoded in a cube
1997
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Contact [IMDb link]
Prime numbers as contact (thanks to Misha Tiberend for suggesting this).

Like Mike [IMDb link]
Supersized triangles

1997

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

2002
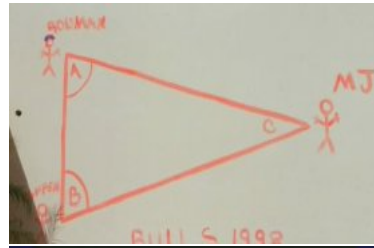
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Big [IMDb link]

Josh helps a kid with algebra

1988

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Good Night, Mr Bean [IMDb link]

Mr Bean watches chess game and counts sheep addition problem to go to sleep

1995

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Perfect Score [IMDb link]

SAT problems (more)

2004

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Mission Impossible III [IMDb link]

Pendulum swing (Thanks to Lesa Vandiver for the suggestion)

2006

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Count of Monte Cristo [IMDb link]

I offer something priceless. I offer knowledge. Abbe Faria teaches Edmond Dantesphilosophy, mathematics and economics.

2002

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Clueless [IMDb link]

The math problem 7x7

1995

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Da Vinci Code [IMDb link]

The Fibonnacci sequence 1 1 2 3 5 8 13.

2006

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

The Alien Girl [IMDb link]

The "Toricelli Void" appears in this Russian thriller. This is not a strict mathematical reference but mathematicians like Blaise Pascal have thought about vacuum. Vacuum is still an enigma and is related to the question what is space and time. The holy grail of physics to relate quantum mechanics with general relativity is also a mathematical problem. (Thanks to Nk P for the suggestion).

2010

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Chaos [IMDb link]

The popular book of James Gleick on Chaos

2005

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Casino Royale [IMDb link]

Some mathematical themes and patterns motivated by mathematics appear in the intro

2006

To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Mr. Hollands Opus [IMDb link]

If I'm forced to choose from Mozart or Reading and Writing and Long divisions, I choose long division. - You

Numb3rs (intro to

can cut the arts, but the kids will have nothing anymore to read and write about.
1995
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

pilot) [IMDb link]

Mathematics is everywhere. It is also used to solve crimes.
2005
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Numb3rs (pilot) [IMDb link]

Using statistics to find location of criminal and the odds to win the lottery.
2005
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Horse feathers [IMDb link]

Caching a virtual check
1932
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Yakitate Japan episode 40 [IMDb link]

Encoding a message as a number to base 26. (Thanks to visitor Chu-Wee Lim to suggest this).
2004
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Die hard III (St Ives) [IMDb link]

The classic St Ives riddle 7x7x7x7. (Thanks to Cheryl McDuff for the suggestion)
1995
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Die hard III (bottle) [IMDb link]

A classic water bottle riddle. How to produce exactly 4 gallons with a 3 and a 5 gallon pan. (Thanks to Cheryl McDuff for the suggestion)
1995
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Fahrenheit 451 [IMDb link]

Gray suited students recite multiplication tables.
1966
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Caddyshack [IMDb link]

In one physical model, the shortest distance between two points is a straight line - in the opposite direction.
1980
To the movie. Direct media links: Quicktime MP4, Webm and Ogg Vorbis.

Links

Here are some references and links to other collections.

- Hollywood's math problem in Boston.com
- movie quote search engine. Search for math
- entry [PDF] of Sofia project
- http://world.std.com/~reinhold/mathmovies.html
- http://members.aol.com/vlorbik/tenpage/movies.html
- http://www.pbs.org/teachersource/mathline/concepts/movies.shtm
- http://www.math.tamu.edu/~dallen/hollywood/mathindex.htm
- Math in the movies for middle and high school teachers
- The Countdown resource is a multimedia math education initiative
- Simpsons Math
- Education notes by Edmond Barbeau, Toronto
- Online PhD resources

News

This Math in movies page appeared podcast of Jamillah.

Thanks

Many thanks to all the following 160 individuals for valuable suggestions on this page. This website would never be what it is without you: Danny Aarons, Roger Alperin, Vanessa Aslan-Blair, Henry Baldursson, Irene Barnett, Mark Barsamian, Jason Baumgartner, Wyley Beatty, Detlev Beutner, Star Behar, Bret Benesh, A.M. Bernard, Cheryl Bjurstrom, John Boller, Michael Bradley, Tony Brockman, Demien Brown, Jennifer Brown, Ryan Brown, Martynas Buivys, Iftikhar Burhanuddin, Rebecca B. Candino, Jo Jo Cadray, Amy Carney, Rich Campbell, Becky Candino, Steve Cerce, Helen Chandler, Jamie Clements, Karen Conner, Keith Conrad, Christoph Cornut, Carlo Cosmatos, Ben Crossman, Joanne Crooks, Jane Ries Cushman, Kelli DeMoville, Maureen Desmond, Mark-Willem Dogterom, Celeste Doolittle, Patrick Downs, Olaf Drechsler, Carlos Dutra, Randy Fee, Joia Felice, C. Fernley, Ron Fisher, Orlando Figueiredo, Kelly Fitzpatrick, David Flottum, Greg Friedman, Cassandra Fuller, Arturo Saenz Garcia, Jim Greene, Steen Grode, Malanie Gurk, Linda Hand, Dan Hansch, Jennifer Harris, Diane Harrington-Kelly, Kathy Henderson, Mattias Hogstrom, Tatiana Ioudovina, Bob Jerrard, Ilona Jingizu, Carolyn Johnson, Jeanne Johnson, Erica Jones, Shawn Jones, Valerie Jones, David Jost, Frank Josellis, Martha Kelly, Ruth Knill, Andre Kristovskis, Luis Las Heras, Claire Laurain, Matt Leingang, Richard Levine, Chu-Wee Lim, Tyson Liskow, Quanquan Liu, Martin Lo, George Lowe, Colleen Lutes, Carla McFadden, Martha MacCormack, Christoph Machu, Pamela Martin, Peter M., Christopher McDade, Alan Miesch, Thomas Moore, Judy McDarby, Cheryl McDuff, Paolo Macasaet, Bob McK., Carla McFadden, Kasper Maes, Hannah Maker, Aba Mbirika, Nivaldo Medeiros, Sebastian Melmoth, Yelena Melnichenko, Susan Milano, Terry Mills, Tania Moloney, Nicolae Moroi, Jim Musumeci, Jim Neumann, Maribeth Olberding, Eric Olsen, Arturo Pacifico Griffini, Nk P, Priyojit Palit, Michael Palme, Val Paradise, Alison Peachey, Leanna Peedin, Renee Pentecost, Evan Pellnitz, Shane Perdue, Rosie Perera, Martin Pettet, Don Ploger, Gregory Potter, Mason Porter, Andrew Ranicki, Sofia Rasmussen, Aleksandra Ravas, Richard Rebarber, Ullrich Reichenbach, Linda Richard, Malik Richardson, James Riordan, Jose Rivas, Brynne Roeder, Sheldon Ross, Louis Sobrecueva, Pedram Safari, Amit Saha, John Sauer, David Scott, Sharon Serano, Carolyn Seubert, Mike Skaggs, John Shaposka, Ionica Smeets, Craig Smorynski, Aaron Snitzer, Jack Snoeyink, Larry Staggs, James Stiehl, Helen Stearman, Barbara Stonewall, Pete Swartz, Michael Sweigard, Richard Trotman, Misha Tiberend, Gilberto Tonali, Mark Tully, Lillian Tubbs, James Taylor, David Tello, Leah Tracy, Suzanne Underwood, Virginia Usnick, Lesa Vandiver, Andy Ventress, Jim Vogel, Benjamin Volk, Shannon Wallace, Kelly Wedding, Art Weiss, Kevin Westrich, Rufus Williams, Michael Wilson, James Windle, Rose Wisneski, Carol Wood, Peter Wung, Mike Yaris, David York, Robin Zaruba, Jon Zingale, Li Zhou, Mohammad Zokaie

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