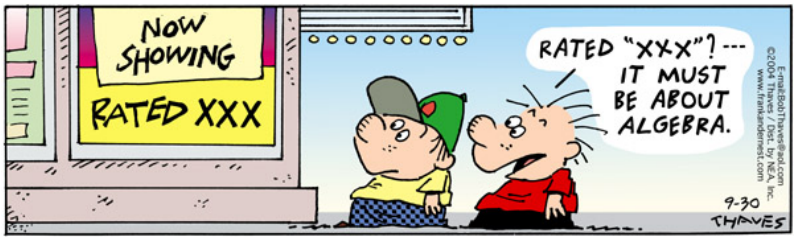
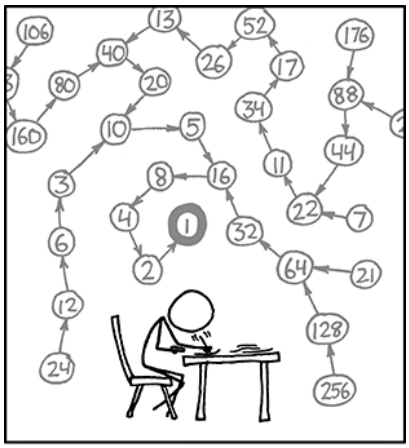
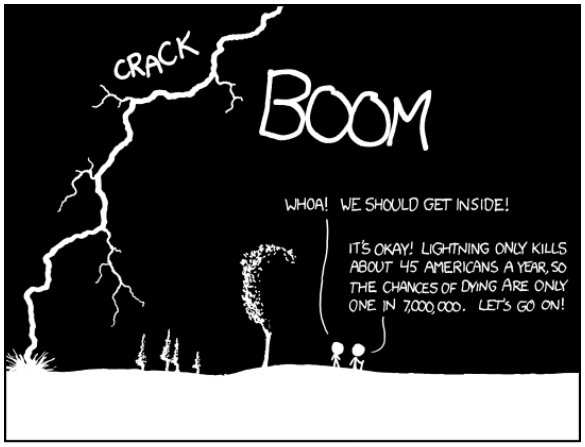
$$x^4-8.212x^3+25.286.894x^2-34.603.963.748x+17.756.354.226.585=0$$

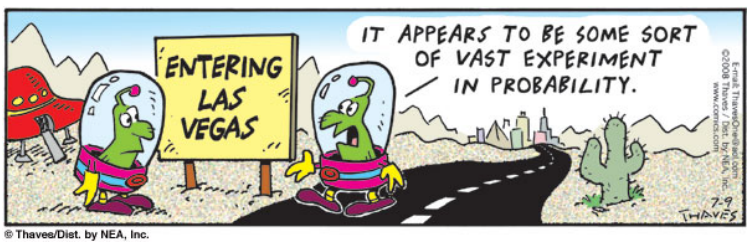




THE COLLATZ CONJECTURE STATES THAT IF YOU PICK A NUMBER, AND IF IT'S EVEN DIVIDE IT BY TWO AND IF IT'S ODD MULTIPLY IT BY THREE AND ADD ONE, AND YOU REPEAT THIS PROCEDURE LONG ENOUGH, EVENTUALLY YOUR FRIENDS WILL STOP CALLING TO SEE IF YOU WANT TO HANG OUT.



THE ANNUAL DEATH RATE AMONG PEOPLE WHO KNOW THAT STATISTIC IS ONE IN SIX.



	1	**S**	(1894) Satyendranath BOSE (1878) Agner Krarup ERLANG (1912) Boris GNEDENKO (1803) Guglielmo LIBRI Carucci dalla Sommaja RM132
	2	**S**	(1822) Rudolf Julius Emmanuel CLAUSIUS (1938) Anatoly SAMOILENKO (1905) Lev Genrichovich SHNIRELMAN
1	**3**	**M**	(1917) Yuri Alexeievich MITROPOLSKY
	4	**T**	(1643) Isaac NEWTON RM071
	5	**W**	(1871) Federigo ENRIQUES RM084 (1871) Gino FANO (1838) Marie Ennemond Camille JORDAN
	6	**T**	(1807) Jozeph Mitza PETZVAL (1841) Rudolf STURM
	7	**F**	(1871) Felix Edouard Justin Emile BOREL (1907) Raymond Edward Alan Christopher PALEY
	8	**S**	(1924) Paul Moritz COHN (1888) Richard COURANT (1942) Stephen William HAWKING
	9	**S**	(1864) Vladimir Adreievich STEKLOV
2	**10**	**M**	(1905) Ruth MOUFANG (1875) Issai SCHUR
	11	**T**	(1545) Guidobaldo DEL MONTE RM120 (1734) Achille Pierre Dionis DU SEJOUR (1707) Vincenzo RICCATI
	12	**W**	(1906) Kurt August HIRSCH
	13	**T**	(1876) Luther Pfahler EISENHART (1876) Erhard SCHMIDT (1864) Wilhelm Karl Werner Otto Fritz Franz WIEN
	14	**F**	(1902) Alfred TARSKI RM096
	15	**S**	(1704) Johann CASTILLON (1850) Sofia Vasilievna KOVALEVSKAJA (1717) Mattew STEWART
	16	**S**	(1801) Thomas KLAUSEN
3	**17**	**M**	(1858) Gabriel KOENIGS (1847) Nikolay Egorovich ZUKOWSKY
	18	**T**	(1856) Luigi BIANCHI (1880) Paul EHRENFEST
	19	**W**	(1813) Rudolf Friedrich Alfred CLEBSCH (1879) Guido FUBINI (1908) Aleksandr Gennadievich KUROSH
	20	**T**	(1775) André Marie AMPÈRE (1904) Renato CACCIOPPOLI RM072 (1895) Gabor SZEGŐ
	21	**F**	(1915) Yuri Vladimirovich LINNIK (1846) Pieter Hendrik SCHOUTE
	22	**S**	(1592) Pierre GASSENDI (1908) Lev Davidovich LANDAU RM063
	23	**S**	(1840) Ernst ABBE (1862) David HILBERT RM060
4	**24**	**M**	(1891) Abram Samoilovitch BESICOVITCH (1914) Vladimir Petrovich POTAPOV
	25	**T**	(1627) Robert BOYLE (1736) Joseph-Louis LAGRANGE RM048 (1843) Karl Hermann Amandus SCHWARZ
	26	**W**	(1799) Benoît Paul Émile CLAPEYRON
	27	**T**	(1832) Charles Lutwidge DODGSON RM108
	28	**F**	(1892) Carlo Emilio BONFERRONI (1701) Charles Marie de LA CONDAMINE
	29	**S**	(1888) Sidney CHAPMAN (1817) William FERREL
	30	**S**	(1619) Michelangelo RICCI
5	**31**	**M**	(1715) Giovanni Francesco FAGNANO dei Toschi (1896) Sofia Alexandrovna JANOWSKAJA (1841) Samuel LOYD

Putnam 1996 - A1

Find the least number A such that for any two squares of combined area 1, a rectangle of area A exists such that the two squares can be packed in the rectangle (without interior overlap). You may assume that the sides of the squares are parallel to the sides of the rectangle.

Math pickup lines

My love for you is a monotonically increasing unbounded function.

MathJokes4MathyFolks

Ten percent of all car thieves are left-handed.
All polar bears are left-handed.
If your car is stolen, there's a 10% chance it was taken by a polar bear.

The description of right lines and circles, upon which geometry is founded, belongs to mechanics. Geometry does not teach us to draw these lines, but requires them to be drawn.

Isaac NEWTON

Mathematics is a game played according to certain simple rules with meaningless marks on paper.

Physics is becoming too difficult for the physicists.

David HILBERT

What I tell you three times is true.

Charles Lutwidge DOGSON

If you are afraid of something, measure it, and you will realize it is a mere triple.

Renato CACCIOPPOLI

Probabilities must be regarded as analogous to the measurement of physical magnitudes: they can never be known exactly, but only within certain approximation.

Emile BOREL

God not only plays dice. He also sometimes throws the dice where they cannot be seen.

Stephen HAWKING

The proof of the Hilbert Basis Theorem is not mathematics: it is theology.

Camille JORDAN

A mathematician's reputation rests on the number of bad proofs he has given.

Abram BESICOVITCH

	1	**T**	(1900) John Charles BURKILL	
	2	**W**	(1522) Lodovico FERRARI	
	3	**T**	(1893) Gaston Maurice JULIA	RM073
	4	**F**	(1905) Eric Cristopher ZEEMAN	
	5	**S**	(1757) Jean Marie Constant DUHAMEL	
	6	**S**	(1612) Antoine ARNAULD	
			(1695) Nicolaus (II) BERNOULLI	RM093
			(1465) Scipione DEL FERRO	RM064
6	**7**	**M**	(1883) Eric Temple BELL	
			(1877) Godfried Harold HARDY	RM049
	8	**T**	(1700) Daniel BERNOULLI	RM093
			(1875) Francis Ysidro EDGEWORTH	
			(1928) Ennio DE GIORGI	RM133
	9	**W**	(1775) Farkas Wolfgang BOLYAI	
			(1907) Harold Scott MacDonald COXETER	RM097
	10	**T**	(1747) AIDA Yasuaki	RM121
	11	**F**	(1839) Josiah Willard GIBBS	
			(1915) Richard Wesley HAMMING	
			(1800) William Henry Fox TALBOT	
	12	**S**	(1914) Hanna CAEMMERER NEUMANN	
	13	**S**	(1805) Johann Peter Gustav LEJEUNE DIRICHLET	
7	**14**	**M**	(1849) Hermann HANKEL	
			(1896) Edward Artur MILNE	
			(1468) Johann WERNER	
	15	**T**	(1564) Galileo GALILEI	RM085
			(1946) Douglas HOFSTADTER	
			(1861) Alfred North WHITEHEAD	
	16	**W**	(1822) Francis GALTON	
			(1853) Gregorio RICCI-CURBASTRO	
			(1903) Beniamino SEGRE	
	17	**T**	(1890) Sir Ronald Aylmer FISHER	
			(1891) Adolf Abraham Halevi FRAENKEL	
	18	**F**	(1404) Leon Battista ALBERTI	
			(1919) Clifford TRUESDELL	
	19	**S**	(1473) Nicolaus COPERNICUS	
	20	**S**	(1844) Ludwig BOLTZMANN	RM061
8	**21**	**M**	(1591) Girard DESARGUES	
			(1915) Evgeny Michailovich LIFSHITZ	
	22	**T**	(1903) Frank Plumpton RAMSEY	
	23	**W**	(1951) Shigefumi MORI	
			(1583) Jean-Baptiste MORIN	
	24	**T**	(1871) Felix BERNSTEIN	
	25	**F**	(1827) Henry WATSON	
	26	**S**	(1786) Dominique Francois Jean ARAGO	
	27	**S**	(1881) Luitzen Egbertus Jan BROUWER	
9	**28**	**M**	(1735) Alexandre Theophile VANDERMONDE	
			(1860) Herman HOLLERITH	RM109

Putnam 1996 - A2

Let C_1 and C_2 be circles whose centers are 10 units apart, and whose radii are 1 and 3. Find, with proof, the locus of all points M for which there exists points X on C_1 and Y on C_2 such that M is the midpoint of the line segment XY.

Math pickup lines

You are the solution to my homogeneous system of linear equations.

MathJokes4MathyFolks

Every second, 4,000 cans are opened around the world.
Every second, ten babies are conceived around the world.
Therefore, each time you open a can, you have a 1 in 400 chance of becoming pregnant.

Technical skill is mastery of complexity while creativity is mastery of simplicity.

Eric Christopher ZEEMAN

No Roman ever died in contemplation over a geometrical diagram.

Alfred North WHITEHEAD

Suppose a contradiction were to be found in the axioms of set theory. Do you seriously believe that a bridge would fall down?

Frank Plumpton RAMSEY

Reductio ad absurdum, which Euclid loved so much, is one of a mathematician's finest weapons. It is a far finer gambit than any chess play: a chess player may offer the sacrifice of a pawn or even a piece, but a mathematician offers the game.

Godfried HARDY

It would be better for the true physics if there were no mathematicians on earth.

Daniel BERNOULLI

A mathematician will recognize Cauchy, Jacobi or Helmholtz after reading a few pages, just as a musician recognize, from the first few bars, Mozart, Beethoven or Schubert.

Ludwig BOLTZMANN

One of the principle objects of research in my department is to find the point of view from which the subject appears in the greatest simplicity.

Willard GIBBS

March

	1	**T**	(1611) John PELL
	2	**W**	(1836) Julius WEINGARTEN
	3	**T**	(1845) Georg CANTOR RM062 (1838) George William HILL
	4	**F**	(1822) Jules Antoine LISSAJOUS
	5	**S**	(1817) Angelo GENOCCHI (1759) Benjamin GOMPERTZ (1512) Gerardus MERCATOR (1915) Laurent SCHWARTZ
	6	**S**	(1866) Ettore BORTOLOTTI
10	**7**	**M**	(1824) Delfino CODAZZI (1792) William HERSCHEL
	8	**T**	(1851) George CHRYSTAL
	9	**W**	(1900) Howard Hathaway AIKEN (1818) Ferdinand JOACHIMSTHAL
	10	**T**	(1864) William Fogg OSGOOD
	11	**F**	(1811) Urbain Jean Joseph LE VERRIER (1853) Salvatore PINCHERLE
	12	**S**	(1685) George BERKELEY (1859) Ernesto CESARO (1824) Gustav Robert KIRCHHOFF
	13	**S**	(1957) Rudy D'ALEMBERT (1861) Jules Joseph DRACH
11	**14**	**M**	(1879) Albert EINSTEIN RM074 (1864) Jozef KURSCHAK
	15	**T**	(1868) Grace CHISOLM YOUNG (1860) Walter Frank Raphael WELDON
	16	**W**	(1750) Caroline HERSCHEL (1846) Magnus Gosta MITTAG-LEFFLER (1789) Georg Simon OHM
	17	**T**	(1876) Ernest Benjamin ESCLANGON (1897) Charles FOX
	18	**F**	(1640) Philippe de LA HIRE (1690) Christian GOLDBACH RM122 (1796) Jacob STEINER
	19	**S**	(1862) Adolf KNESER (1910) Jacob WOLFOWITZ
	20	**S**	(1884) Philip FRANCK (1840) Franz MERTENS (1938) Sergi Petrovich NOVIKOV
12	**21**	**M**	(1884) George David BIRKHOFF (1768) Jean Baptiste Joseph FOURIER
	22	**T**	(1917) Irving KAPLANSKY
	23	**W**	(1882) Emmy Amalie NOETHER RM050 (1897) John Lighton SYNGE (1754) Georg Freiherr von VEGA
	24	**T**	(1948) Sun-Yung (Alice) CHANG (1809) Joseph LIOUVILLE (1966) Gigliola STAFFILANI RM142
	25	**F**	(1538) Christopher CLAUSIUS
	26	**S**	(1848) Konstantin ANDREEV (1913) Paul ERDŐS RM110
	27	**S**	(1857) Karl PEARSON
13	**28**	**M**	(1749) Pierre-Simon de LAPLACE (1928) Alexander GROTHENDIECK RM086
	29	**T**	(1896) Wilhelm ACKERMAN (1825) Francesco FAA' DI BRUNO (1873) Tullio LEVI-CIVITA RM098
	30	**W**	(1892) Stefan BANACH RM134
	31	**T**	(1596) René DESCARTES

Putnam 1996 - A3

Suppose that each of 20 students has made a choice of anywhere from 0 to 6 courses from a total of 6 courses offered. Prove or disprove: there are 5 students and 2 courses such that all 5 have chosen both courses or all 5 have chosen neither course.

Math pickup lines

What's your favourite linear transformation?

MathJokes4MathyFolks

What is the volume of a disk with radius *z* and height *a*? *pi* • *z* • *z* • *a*.

Geometry is the noblest branch of physics.

William Fogg OSGOOD

And what are these fluxions? The velocities of evanescent increments? They are neither finite quantities, nor quantities infinitely small, nor yet nothing. May we not call them ghosts of departed quantities?

George BERKELEY

Common sense is nothing more than a deposit of prejudices laid down in the mind before you reach eighteen.

Albert EINSTEIN

A Mathematician is a machine for turning coffee into theorems.

Paul ERDŐS

Perfect numbers (like perfect men) are very rare.

René DESCARTES

A mathematician is a person who can find analogies between theorems; a better mathematician is one who can see analogies between proofs and the best mathematician can notice analogies between theories. One can imagine that the ultimate mathematician is one who can see analogies between analogies.

Stefan BANACH

Rudi Mathematici

April

	1	**F**	(1895) Alexander Craig AITKEN (1776) Marie-Sophie GERMAIN (1640) Georg MOHR	
	2	**S**	(1934) Paul Joseph COHEN	
	3	**S**	(1892) Hans RADEMACHER (1971) Alice RIDDLE (1909) Stanislaw Marcin ULAM (1835) John Howard Van AMRINGE	
14	**4**	**M**	(1842) Francois Edouard Anatole LUCAS (1809) Benjamin PEIRCE (1949) Shing-Tung YAU	RM123
	5	**T**	(1869) Sergi Alexeievich CHAPLYGIN (1607) Honoré FABRI (1588) Thomas HOBBES (1622) Vincenzo VIVIANI	
	6	**W**	(1801) William Hallowes MILLER	
	7	**T**	(1768) François-Joseph FRANÇAIS	
	8	**F**	(1903) Marshall Harvey STONE	
	9	**S**	(1816) Charles Eugene DELAUNAY (1919) John Presper HECKERT (1791) George PEACOCK	
	10	**S**	(1857) Henry Ernest DUDENEY	
15	**11**	**M**	(1953) Andrew John WILES	
	12	**T**	(1794) Germinal Pierre DANDELIN (1903) Jan TINBERGEN (1852) Carl Louis Ferdinand Von LINDEMANN	
	13	**W**	(1728) Paolo FRISI (1813) Duncan Farquharson GREGORY (1879) Francesco SEVERI	
	14	**T**	(1629) Christiaan HUYGENS	RM135
	15	**F**	(1548) Pietro Antonio CATALDI (1452) Leonardo da VINCI (1707) Leonhard EULER (1809) Herman Gunther GRASSMANN	RM051
	16	**S**	(1823) Ferdinand Gotthold Max EISENSTEIN (1682) John HADLEY	
	17	**S**	(1798) Etienne BOBILLIER (1853) Arthur Moritz SCHONFLIES (1863) Augustus Edward Hough LOVE	
16	**18**	**M**	(1907) Lars Valerian AHLFORS (1949) Charles Louis FEFFERMAN (1918) Hsien Chung WANG	
	19	**T**	(1905) Charles EHRESMANN (1901) Kiyoshi OKA (1880) Evgeny Evgenievich SLUTSKY (1883) Richard VON MISES	
	20	**W**	(1839) Francesco SIACCI	
	21	**T**	(1774) Jean Baptiste BIOT (1652) Michel ROLLE (1875) Teiji TAKAGI	
	22	**F**	(1887) Harald August BOHR (1811) Otto Ludwig HESSE	RM063
	23	**S**	(1858) Max Karl Ernst Ludwig PLANCK	
	24	**S**	(1863) Giovanni VAILATI (1899) Oscar ZARISKI	RM099
17	**25**	**M**	(1849) Felix Christian KLEIN (1903) Andrei Nicolayevich KOLMOGOROV (1900) Wolfgang PAULI	
	26	**T**	(1889) Ludwig Josef Johan WITTGENSTEIN	
	27	**W**	(1755) Marc-Antoine PARSEVAL des Chenes	
	28	**T**	(1906) Kurt GODEL	RM087
	29	**F**	(1854) Jules Henri POINCARÈ	RM075
	30	**S**	(1777) Johann Carl Friedrich GAUSS (1916) Claude Elwood SHANNON	RM111

Putnam 1996 - A4

Let S be the set of ordered triplets (a,b,c) of distinct elements of a finite set A. Suppose that:

1. $(a,b,c)\in S \Leftrightarrow (b,c,a)\in S$;
2. $(a,b,c)\in S \Leftrightarrow (c,b,a)\notin S$;
3. (a,b,c) e $(c,d,a) \in S \Leftrightarrow (b,c,d)$ e $(d,a,b) \in S$

Prove that exists a one-to-one function g from A to the set of real numbers such that $g(a)<g(b)<g(c)\Rightarrow (a,b,c)\in S$.

Math pickup lines

I wish I were a derivative so I could lie tangent to your curves.

MathJokes4MathyFolks

A math professor is a person who talks in someone else's sleep.

We could present spatially an atomic fact which contradicted the laws of physics, but not one which contradicted the laws of geometry.

Ludwig WITTGENSTEIN

Knowing what is big and what is small is more important than being able to solve partial differential equations.

Any good idea can be stated in fifty words or less.

The infinite we shall do right away. The finite may take a little longer.

Stanislaw Marcin ULAM

Mathematicians are born, not made.

Jules Henri POINCARÉ

If anybody says he can think about quantum problems without getting giddy, that only shows he has not understood the first thing about them.

Max Karl Ernst Ludwig PLANCK

This paper is so bad it is not even wrong.

Wolfgang PAULI

Everyone knows what a curve is, until he has studied enough mathematics to become confused through the countless number of possible exceptions.

Felix KLEIN

Rudi Mathematici

May

	1	**S**	(1825) Johann Jacob BALMER	RM122
18	**2**	**M**	(1860) D'Arcy Wentworth THOMPSON	RM138
			(1905) Kazimierz ZARANKIEWITZ	
	3	**T**	(1842) Otto STOLZ	
			(1860) Vito VOLTERRA	RM136
	4	**W**	(1845) William Kingdon CLIFFORD	
	5	**T**	(1833) Lazarus Emmanuel FUCHS	
			(1897) Francesco Giacomo TRICOMI	
	6	**F**	(1872) Willem DE SITTER	
			(1906) André WEIL	RM088
	7	**S**	(1896) Pavel Sergieievich ALEXANDROV	
			(1926) Alexis Claude CLAIRAUT	
			(1881) Ebenezer CUNNINGHAM	
			(1854) Giuseppe VERONESE	
	8	**S**	(1859) Johan Ludwig William Valdemar JENSEN	
19	**9**	**M**	(1876) Gilbert Ames BLISS	
			(1746) Gaspard MONGE	
	10	**T**	(1788) Augustin Jean FRESNEL	
			(1847) William Karl Joseph KILLING	
			(1958) Piotr Rezierovich SILVERBRAHMS	
	11	**W**	(1918) Richard Phillips FEYNMAN	RM076
	12	**T**	(1845) Pierre René Jean Baptiste Henry BROCARD	
			(1902) Frank YATES	
			(1820) Florence NIGHTINGALE	RM104
	13	**F**	(1750) Lorenzo MASCHERONI	
	14	**S**	(1863) John Charles FIELDS	RM100
			(1832) Rudolf Otto Sigismund LIPSCHITZ	
	15	**S**	(1939) Brian HARTLEY	
20	**16**	**M**	(1718) Maria Gaetana AGNESI	RM112
			(1821) Pafnuti Lvovi CHEBYSHEV	
			(1911) John (Jack) TODD	RM139
	17	**T**	(1940) Alan KAY	
	18	**W**	(1850) Oliver HEAVISIDE	
			(1892) Bertrand Arthur William RUSSELL	RM052
	19	**T**	(1919) Georgii Dimitirievich SUVOROV	
	20	**F**	(1861) Henry Seely WHITE	
	21	**S**	(1792) Gustave Gaspard de CORIOLIS	
			(1471) Albrecht DÜRER	RM124
	22	**S**	(1865) Alfred Cardew DIXON	
21	**23**	**M**	(1914) Lipa BERS	
	24	**T**	(1544) William GILBERT	
	25	**W**	(1838) Karl Mikailovich PETERSON	
	26	**T**	(1667) Abraham DE MOIVRE	
			(1896) Yuri Dimitrievich SOKOLOV	
	27	**F**	(1862) John Edward CAMPBELL	
	28	**S**	(1710) Johann (II) BERNOULLI	RM093
			(1676) Jacopo Francesco RICCATI	
	29	**S**	(1882) Harry BATEMAN	
22	**30**	**M**	(1814) Eugene Charles CATALAN	
	31	**T**	(1926) John KEMENY	

Putnam 1996 - A5

If p is a prime number greater than 3 and $k=\lfloor 2p/3\rfloor$, prove that the sum:

$$\binom{p}{1}+\binom{p}{2}+\ldots+\binom{p}{k}$$

is divisible by p^2.

Math pickup lines

Your beauty defies real **and** complex analysis.

MathJokes4MathyFolks

What did 0 say to 8?

Nice belt.

Rigour is to the mathematician what morality is to men.

André WEIL

Although this may seem a paradox, all exact science is dominated by the idea of approximation.

Men who are unhappy, like men who sleep badly, are always proud of the fact.

Bertrand Arthur William RUSSELL

Nature is not embarrassed by difficulties of analysis.

Augustin Jean FRESNEL

To those who do not know mathematics it is difficult to get across a real feeling as to the deepest beauty of nature [...] If you want to appreciate nature, it is necessary to understand the language that she speaks in.

Richard Phillips FEYNMAN

To isolate mathematics from the practical demands of the sciences is to invite the sterility of a cow shut away from the bulls.

Pafnuti Lvovi CHEBYSHEV

Mathematics is very much like poetry. What makes a great poem is that there is a great amount of thought expressed in very few words. In this sense, formulas like $e^{i\pi}+1=0$ *are poems.*

Lipa BERS

This series is divergent, therefore we may be able to do something with it.

Oliver HEAVISIDE

June

	1	**W**	(1796) Sadi Leonard Nicolas CARNOT (1851) Edward Bailey ELLIOTT (1899) Edward Charles TITCHMARSH
	2	**T**	(1895) Tibor RADÓ
	3	**F**	(1659) David GREGORY
	4	**S**	(1809) John Henry PRATT
	5	**S**	(1819) John Couch ADAMS (1814) Pierre Laurent WANTZEL RM065
23	**6**	**M**	(1857) Aleksandr Michailovitch LYAPUNOV RM077 (1436) Johann Muller REGIOMONTANUS (1906) Max ZORN
	7	**T**	(1863) Edward Burr VAN VLECK
	8	**W**	(1625) Giovanni Domenico CASSINI (1858) Charlotte Angas SCOTT (1860) Alicia Boole STOTT
	9	**T**	(1885) John Edensor LITTLEWOOD RM049
	10	**F**	(940) Mohammad ABU'L WAFA Al-Buzjani (1887) Vladimir Ivanovich SMIRNOV RM101
	11	**S**	(1937) David Bryant MUMFORD
	12	**S**	(1888) Zygmunt JANYSZEWSKI
24	**13**	**M**	(1876) William Sealey GOSSET (Student) (1831) James Clerk MAXWELL RM113 (1928) John Forbes NASH
	14	**T**	(1903) Alonzo CHURCH (1736) Charles Augustin de COULOMB (1856) Andrei Andreyevich MARKOV RM125
	15	**W**	(1894) Nikolai Gregorievich CHEBOTARYOV (1640) Bernard LAMY
	16	**T**	(1915) John Wilder TUKEY
	17	**F**	(1898) Maurits Cornelius ESCHER
	18	**S**	(1858) Andrew Russell FORSYTH (1884) Charles Ernest WEATHERBURN
	19	**S**	(1902) Wallace John ECKERT (1623) Blaise PASCAL RM053
25	**20**	**M**	(1873) Alfred LOEWY
	21	**T**	(1828) Giuseppe BRUNO (1781) Simeon Denis POISSON
	22	**W**	(1864) Hermann MINKOWSKY (1822) Mario PIERI (1910) Konrad ZUSE
	23	**T**	(1912) Alan Mathison TURING RM089
	24	**F**	(1880) Oswald VEBLEN
	25	**S**	(1908) William Van Orman QUINE
	26	**S**	(1918) Yudell Leo LUKE (1823) William THOMSON, Lord Kelvin
26	**27**	**M**	(1806) Augustus DE MORGAN
	28	**T**	(1875) Henri Leon LEBESGUE
	29	**W**	(1888) Aleksandr Aleksandrovich FRIEDMANN RM101
	30	**T**	(1791) Felix SAVART

Putnam 1996 - A6

Let $c > 0$ be a constant. Give a complete description, with proof, of the set of all continuous functions $f : R \to R$ such that $f(x) = f\left(x^2 + c\right)$ for all $x \in R$.

Math pickup lines

Come on baby, let's off to a decimal place I know of and I'll take you to the limit.

MathJokes4MathyFolks

In the expression x^3, what do you call the 3?
An exponent.

In the expression y^2, what do you call the 2?
A y ponent.

Algebra goes to the heart of the matter as it ignores the casual nature of particular cases.

Edward Charles TITCHMARSH

Fourier is a mathematical poem.

William THOMSON, Lord Kelvin

Life is good for only two things, discovering mathematics and teaching mathematics.

Siméon Denis POISSON

We are usually convinced more easily by reasons we have found ourselves than by those which have occurred to others.

Blaise PASCAL

The mathematical education of the young physicist [Albert Einstein] *was not very solid, which I am in a good position to evaluate since he obtained it from me in Zurich some time ago.*

Hermann MINKOWSKY

Ampère was the Newton of Electricity.

James Klerk MAXWELL

Before creation God did just pure mathematics. Then He thought it would be a pleasant change to do some applied.

John Edensor LITTLEWOOD

July

	1	**F**	(1788) Jean Victor PONCELET (1643) Gottfried Wilhelm von LEIBNIZ RM054
	2	**S**	(1852) William BURNSIDE (1820) William John Racquorn RANKINE
	3	**S**	(1807) Ernest Jean Philippe Fauque de JONQUIERE (1897) Jesse DOUGLAS
27	**4**	**M**	(1917) Michail Samoilovich LIVSIC (1906) Daniel Edwin RUTHERFORD
	5	**T**	(1936) James MIRRLEES
	6	**W**	(1849) Alfred Bray KEMPE
	7	**T**	(1906) William FELLER (1922) Vladimir Aleksandrovich MARCHENKO (1816) Johann Rudolf WOLF
	8	**F**	(1760) Christian KRAMP (1904) Henri Paul CARTAN RM126
	9	**S**	(1845) George Howard DARWIN RM138
	10	**S**	(1862) Roger COTES (1868) Oliver Dimon KELLOGG
28	**11**	**M**	(1890) Giacomo ALBANESE (1857) Sir Joseph LARMOR (1888) Jacob David TAMARKIN RM101
	12	**T**	(1895) Richard BUCKMINSTER FULLER RM066 (1875) Ernest Sigismund FISCHER
	13	**W**	(1527) John DEE (1741) Karl Friedrich HINDENBURG
	14	**T**	(1671) Jacques D'ALLONVILLE (1793) George GREEN RM078
	15	**F**	(1865) Wilhelm WIRTINGER (1906) Adolph Andrej Pavlovich YUSHKEVICH
	16	**S**	(1903) Irmgard FLUGGE-LOTZ (1678) Jakob HERMANN
	17	**S**	(1837) Wilhelm LEXIS (1831) Victor Mayer Amedeè MANNHEIM
29	**18**	**M**	(1635) Robert HOOKE RM114 (1853) Hendrik Antoon LORENTZ (1013) Hermann von REICHENAU
	19	**T**	(1768) Francois Joseph SERVOIS
	20	**W**	(1947) Gerd BINNIG (1876) Otto BLUMENTHAL
	21	**T**	(1620) Jean PICARD (1848) Emil WEYR (1849) Robert Simpson WOODWARD
	22	**F**	(1784) Friedrich Wilhelm BESSEL
	23	**S**	(1775) Etienne Louis MALUS (1854) Ivan SLEZYNSKY
	24	**S**	(1871) Paul EPSTEIN (1923) Christine Mary HAMILL (1851) Friedrich Herman SCHOTTKY
30	**25**	**M**	(1808) Johann Benedict LISTING
	26	**T**	(1903) Kurt MAHLER
	27	**W**	(1801) George Biddel AIRY (1667) Johann BERNOULLI RM093 (1848) Lorand Baron von EÖTVÖS (1871) Ernst Friedrich Ferdinand ZERMELO RM090
	28	**T**	(1954) Gerd FALTINGS
	29	**F**	(1898) Isidor Isaac RABI
	30	**S**	(1889) Vladimir Kosma ZWORKYN
	31	**S**	(1704) Gabriel CRAMER (1712) Johann Samuel KOENIG

Putnam 1996 - B1

Define a **selfish** set to be a set which has its own cardinality (number of elements) as an element. Find, with proof, the number of subsets of $\{1,2,\ldots n\}$ which are *minimal* selfish sets, that is, selfish sets none of whose proper subsets is selfish.

Math pickup lines

Let's take each other to the limit to see if we converge.

MathJokes4MathyFolks

Teacher: What is 14 + 14?
Student: 28.
Teacher: That's good!
Student: Good? It's *perfect!*

[The infinitesimals] *neither have nor can have theory; in practise it is a dangerous instrument in the hands of beginners. Anticipating, for my part, the judgement of posterity, I would predict that this method will be accused one day, and rightly, of having retarded the progress of the mathematical sciences.*

Francois Joseph SERVOIS

When working on a problem, I never think about beauty; I think only of how to solve the problem. But when I have finished, if the solution is not beautiful, I know that it is wrong.

Richard Buckminster FULLER

Miracles are not to be multiplied beyond necessity.

Taking mathematics from the beginning of the word to the time of Newton, what he has done is much the better half.

Gottfried LEIBNITZ

All possible definitions of probability fall short of the actual practice.

William FELLER

A quantity that is increased or decreased of an infinitely small quantity is neither increased nor decreased.

Johann BERNOULLI

31	**1**	**M**	(1861) Ivar Otto BENDIXSON (1881) Otto TOEPLITZ	
	2	**T**	(1902) Mina Spiegel REES (1856) Ferdinand RUDIO	
	3	**W**	(1914) Mark KAC	RM115
	4	**T**	(1805) Sir William Rowan HAMILTON (1838) John VENN	RM079
	5	**F**	(1802) Niels Henrik ABEL	RM055
	6	**S**	(1638) Nicolas MALEBRANCHE (1741) John WILSON	
	7	**S**	(1868) Ladislaus Josephowitsch BORTKIEWITZ	
32	**8**	**M**	(1902) Paul Adrien Maurice DIRAC	RM103
	9	**T**	(1537) Francesco BAROZZI (Franciscus Barocius)	
	10	**W**	(1602) Gilles Personne de ROBERVAL	
	11	**T**	(1730) Charles BOSSUT (1842) Enrico D'OVIDIO	
	12	**F**	(1882) Jules Antoine RICHARD (1887) Erwin Rudolf Josef Alexander SCHRÖDINGER	RM103
	13	**S**	(1625) Erasmus BARTHOLIN (1861) Cesare BURALI-FORTI (1819) George Gabriel STOKES	
	14	**S**	(1530) Giovanni Battista BENEDETTI (1865) Guido CASTELNUOVO (1842) Jean Gaston DARBOUX (1866) Charles Gustave Nicolas de la VALLÉE-POUSSIN	
33	**15**	**M**	(1892) Louis Pierre Victor duc de BROGLIE (1863) Aleksei Nikolaevich KRYLOV (1901) Piotr Sergeevich NOVIKOV	
	16	**T**	(1821) Arthur CAYLEY (1773) Louis-Benjamin FRANCOEUR	
	17	**W**	(1601) Pierre de FERMAT	RM091
	18	**T**	(1685) Brook TAYLOR	
	19	**F**	(1646) John FLAMSTEED (1739) Georg Simon KLUGEL	
	20	**S**	(1863) Corrado SEGRE (1882) Wacław SIERPIŃSKI (1710) Thomas SIMPSON	
	21	**S**	(1789) Augustin Louis CAUCHY	RM127
34	**22**	**M**	(1647) Denis PAPIN	
	23	**T**	(1829) Moritz Benedikt CANTOR (1683) Giovanni POLENI (1842) Osborne REYNOLDS	
	24	**W**	(1561) Bartholomeo PITISCUS (1942) Karen Keskulla UHLENBECK	
	25	**T**	(1561) Philip van LANSBERGE (1844) Thomas MUIR	
	26	**F**	(1728) Johann Heinrich LAMBERT (1875) Giuseppe VITALI	
	27	**S**	(1858) Giuseppe PEANO	RM067
	28	**S**	(1796) Irénée Jules BIENAYMÉ	
35	**29**	**M**	(1904) Leonard ROTH	
	30	**T**	(1856) Carle David Tolmé RUNGE (1906) Olga TAUSSKY-TODD	RM139
	31	**W**	(1821) Hermann Ludwig Ferdinand von HELMHOLTZ	

Putnam 1996 - B2

Show that for every positive integer n,

$$\left(\frac{2n-1}{e}\right)^{\frac{2n-1}{2}} < 1\cdot 3\cdot 5\cdot \ldots \cdot (2n-1) < \left(\frac{2n+1}{e}\right)^{\frac{2n+1}{2}}$$

Math pickup lines

If I were a function you would be my asymptote – I always tend towards you.

MathJokes4MathyFolks

Q: How many mathematicians does it take to change a light bulb?
A: Just one. She gives it to three physicists, thus reducing it to a problem that has already been solved.

Thus, the task is, not so much to see what no one has yet seen; but to think what nobody has yet thought, about that which everybody sees.

Erwin Rudolf Joseph Alexander SCHRÖDINGER

This result is too beautiful to be false; it is more important to have beauty in one's equations than to have them fit experiment.

Paul Adrien Maurice DIRAC

And perhaps, posterity will thank me for having shown it that the ancients did not know everything.

Pierre de FERMAT

As for everything else, so for a mathematical theory: beauty can be perceived but not explained.

Arthur CAYLEY

There are surely worse things than being wrong, and being dull and pedantic are surely among them.

Mark KAC

Whoever [in the pursuit of science] *seeks after immediate practical utility may rest assured that he seeks in vain.*

Hermann von HELMHOLTZ

September

	1	**T**	(1835) William Stankey JEVONS (1659) Joseph SAURIN
	2	**F**	(1878) Mauriche René FRECHET (1923) René THOM RM080
	3	**S**	(1884) Solomon LEFSCHETZ (1908) Lev Semenovich PONTRYAGIN (1814) James Joseph SYLVESTER RM104
	4	**S**	(1809) Luigi Federico MENABREA RM059
36	**5**	**M**	(1725) Jean Etienne MONTUCLA (1667) Giovanni Girolamo SACCHERI RM128
	6	**T**	(1859) Boris Jakovlevich BUKREEV (1863) Dimitri Aleksandrovich GRAVE
	7	**W**	(1707) George Louis Leclerc comte de BUFFON (1955) Efim ZELMANOV
	8	**T**	(1588) Marin MERSENNE RM092 (1584) Gregorius SAINT-VINCENT
	9	**F**	(1860) Frank MORLEY
	10	**S**	(1839) Charles Sanders PEIRCE RM123
	11	**S**	(1623) Stefano degli ANGELI (1877) sir James Hopwood JEANS
37	**12**	**M**	(1900) Haskell Brooks CURRY (1891) Antoine André Louis REYNAUD
	13	**T**	(1885) Wilhelm Johann Eugen BLASCHKE (1873) Constantin CARATHÉODORY
	14	**W**	(1858) Henry Burchard FINE (1891) Ivan Matveevich VINOGRADOV
	15	**T**	(973) Abu Arrayhan Muhammad ibn Ahmad AL'BIRUNI (1886) Paul Pierre LEVY
	16	**F**	(1494) Francisco MAUROLICO (1736) Johann Nikolaus TETENS
	17	**S**	(1743) Marie Jean Antoine Nicolas de Caritat de CONDORCET (1826) Georg Friedrich Bernhard RIEMANN RM068
	18	**S**	(1752) Adrien Marie LEGENDRE RM140
38	**19**	**M**	(1749) Jean Baptiste DELAMBRE
	20	**T**	(1861) Frank Nelson COLE (1842) Alexander Wilhelm von BRILL
	21	**W**	(1899) Juliusz Pawel SCHAUDER
	22	**T**	(1769) Louis PUISSANT (1765) Paolo RUFFINI RM116 (1803) Jaques Charles Francois STURM
	23	**F**	(1900) David van DANTZIG (1768) William WALLACE
	24	**S**	(1501) Girolamo CARDANO RM064 (1625) Johan DE WITT (1801) Michail Vasilevich OSTROGRADSKI RM056
	25	**S**	(1888) Stefan MAZURKIEWICZ (1819) George SALMON
39	**26**	**M**	(1688) Willem Jakob 's GRAVESANDE (1854) Percy Alexander MACMAHON (1891) Hans REICHENBACH
	27	**T**	(1855) Paul Émile APPELL (1876) Earle Raymond HEDRICK (1919) James Hardy WILKINSON
	28	**W**	(1873) Julian Lowell COOLIDGE (1761) Ferdinand Francois Desirè Budan de BOISLAURENT (1698) Pierre Louis Moreau de MAUPERTUIS
	29	**T**	(1812) Adolph GOPEL (1561) Adriaan van ROOMEN
	30	**F**	(1775) Robert ADRAIN (1883) Ernst HELLINGER (1829) Joseph WOLSTENHOLME

Putnam 1996 - B3

Given that $\{x_1, x_2, \ldots, x_n\} = \{1, 2, \ldots, n\}$, find, with proof, the largest possible value, as function of n (with $n \geq 2$) of

$$x_1 x_2 + x_2 x_3 + \ldots + x_{n-1} x_n + x_n x_1 .$$

Math pickup lines

Your beauty cannot be spanned by a finite basis of vectors.

MathJokes4MathyFolks

Father: Did you learn a lot in math class today?
Son: Apparently not! They want me to come back again tomorrow!

I believe that proving is not a natural activity for mathematicians.

René THOM

The early study of Euclid made me a hater of geometry.

James Joseph SYLVESTER

If error is corrected whenever it is recognised, the path of error is the path of truth.

Hans REICHENBACH

If it's just turning the crank it's algebra, but if it's got an idea in it, it's topology.

Solomon LEFSCHETZ

This branch of mathematics [Probability] *is the only one, I believe, in which good writers frequently get results which are entirely erroneous.*

Charles Sanders PEIRCE

We may as well cut out the group theory. That is a subject that will never be of any use in physics.

sir James Hopwood JEANS

[Upon proving that the best betting strategy for "Gambler's Ruin" was to bet all on the first trial.]
It is true that a man who does this is a fool. I have only proved that a man who does anything else is an even bigger fool.

Julian Lowell COOLIDGE

If only I had the theorems! Then I should find the proofs easily enough...

Bernhard RIEMANN

	1	**S**	(1671) Luigi Guido GRANDI (1898) Bela KEREKJARTO'
	2	**S**	(1908) Arthur ERDÉLYI (1825) John James WALKER
40	**3**	**M**	(1944) Pierre René DELIGNE
	4	**T**	(1759) Louis Francois Antoine ARBOGAST (1797) Jerome SAVARY
	5	**W**	(1781) Bernhard Placidus Johann Nepomuk BOLZANO RM117 (1861) Thomas Little HEATH (1732) Nevil MASKELYNE
	6	**T**	(1831) Julius Wilhelm Richard DEDEKIND RM081 (1552) Matteo RICCI RM141 (1908) Sergei Lvovich SOBOLEV
	7	**F**	(1885) Niels BOHR RM063
	8	**S**	(1908) Hans Arnold HEILBRONN
	9	**S**	(1581) Claude Gaspard BACHET de Meziriac (1873) Karl SCHWARZSCHILD (1704) Johann Andrea von SEGNER
41	**10**	**M**	(1861) Heinrich Friedrich Karl Ludwig BURKHARDT
	11	**T**	(1910) Cahit ARF (1777) Barnabè BRISSON (1675) Samuel CLARKE (1885) Alfred HAAR
	12	**W**	(1860) Elmer SPERRY
	13	**T**	(1890) Georg FEIGL (1893) Kurt Werner Friedrich REIDEMEISTER (1932) John Griggs THOMSON
	14	**F**	(1868) Alessandro PADOA (1801) Joseph Antoine Ferdinand PLATEAU (1687) Robert SIMSON
	15	**S**	(1776) Peter BARLOW (1735) Jesse RAMSDEN (1608) Evangelista TORRICELLI
	16	**S**	(1879) Philip Edward Bertrand JOURDAIN
42	**17**	**M**	(1888) Paul Isaac BERNAYS (1759) Jacob (II) BERNOULLI RM093
	18	**T**	(1741) John WILSON
	19	**W**	(1910) Subrahmanyan CHANDRASEKHAR (1903) Jean Frédéric Auguste DELSARTE
	20	**T**	(1865) Aleksandr Petrovich KOTELNIKOV (1632) Sir Cristopher WREN RM105 (1863) William Henry YOUNG
	21	**F**	(1677) Nicolaus (I) BERNOULLI RM093 (1823) Enrico BETTI (1855) Giovan Battista GUCCIA RM129 (1914) Martin GARDNER RM137
	22	**S**	(1907) Sarvadaman CHOWLA (1587) Joachim JUNGIUS (1895) Rolf Herman NEVANLINNA
	23	**S**	(1865) Piers BOHL
43	**24**	**M**	(1804) Wilhelm Eduard WEBER (1873) Edmund Taylor WHITTAKER
	25	**T**	(1811) Évariste GALOIS RM069
	26	**W**	(1911) Shiing-Shen CHERN (1849) Ferdinand Georg FROBENIUS (1857) Charles Max MASON
	27	**T**	(1678) Pierre Remond de MONTMORT (1856) Ernest William HOBSON
	28	**F**	(1804) Pierre François VERHULST
	29	**S**	(1925) Klaus ROTH
	30	**S**	(1906) Andrej Nikolaevich TICHONOV
44	**31**	**M**	(1815) Karl Theodor Wilhelm WEIERSTRASS RM057

Putnam 1996 - B4

For any square matrix A, we can define sin$A$ by the usual power series:

$$\sin A = \sum_{n=0}^{\infty} \frac{(-1)^n}{(2n+1)!} A^{2n+1}.$$

Prove or disprove: there exists a 2x2 matrix A with real entries such that

$$\sin A = \begin{pmatrix} 1 & 1996 \\ 0 & 1 \end{pmatrix}$$

Math pickup lines

My love for you is like a fractal – it goes on forever.

MathJokes4MathyFolks

What's the difference between a math PhD and a large pizza? A large pizza can feed a family of four.

Much as I venerate the name of Newton, I am not obliged to believe that he was infallible. I see ... with regret that he was liable to err, and that his authority has, perhaps, sometimes even retarded the progress of science.

William Henry YOUNG

It is true that a mathematician who is not also something of a poet will never be a perfect mathematician.

Karl Theodor Wilhem WEIERSTRASS

An expert is a man who has made all the mistakes which can be made in a very narrow field.

Anyone who is not shocked by quantum theory has not understood it.

Prediction is very difficult, especially about the future.

How wonderful that we have met with a paradox. Now we have some hope of making progress.

Niels BOHR

$2^{30}(2^{31}-1)$ *is the greatest perfect number that will ever be discovered, for, as they are merely curious without being useful, it is not likely that any person will attempt to find a number beyond it.*

Peter BARLOW

Unfortunately what is little recognized is that the most worthwhile scientific books are those in which the author clearly indicates what he does not know; for an author most hurts his readers by concealing difficulties.

Evariste GALOIS

Hanc Marginis Exiguitas Non Capiet

Rudi Mathematici

November

	1	**T**	(1535) Giambattista DELLA PORTA
	2	**W**	(1815) George BOOLE RM094
	3	**T**	(1878) Arthur Byron COBLE (1867) Martin Wilhelm KUTTA
	4	**F**	(1744) Johann (III) BERNOULLI RM093 (1865) Pierre Simon GIRARD
	5	**S**	(1930) John Frank ADAMS (1848) James Whitbread Lee GLAISHER
	6	**S**	(1781) Giovanni Antonio Amedeo PLANA
45	**7**	**M**	(1660) Thomas Fantet DE LAGNY (1799) Karl Heinrich GRAFFE (1898) Raphael SALEM
	8	**T**	(1846) Eugenio BERTINI (1848) Fredrich Ludwig Gottlob FREGE (1656) Edmond HALLEY (1869) Felix HAUSDORFF
	9	**W**	(1847) Carlo Alberto CASTIGLIANO (1885) Theodor Franz Eduard KALUZA (1922) Imre LAKATOS (1885) Hermann Klaus Hugo WEYL RM082
	10	**T**	(1829) Helwin Bruno CHRISTOFFEL
	11	**F**	(1904) John Henry Constantine WHITEHEAD
	12	**S**	(1842) John William STRUTT Lord RAYLEIGH (1927) Yutaka TANIYAMA (1825) Michail Egorovich VASHCHENKO-ZAKHARCHENKO
	13	**S**	(1878) Max Wilhelm DEHN (1876) Ernest Julius WILKZYNSKY
46	**14**	**M**	(1845) Ulisse DINI
	15	**T**	(1688) Louis Bertrand CASTEL (1793) Michel CHASLES (1794) Franz Adolph TAURINUS
	16	**W**	(1835) Eugenio BELTRAMI
	17	**T**	(1717) Jean Le Rond D'ALEMBERT (1597) Henry GELLIBRAND (1790) August Ferdinand MÖBIUS RM118
	18	**F**	(1927) Jon Leslie BRITTON (1872) Giovanni Enrico Eugenio VACCA
	19	**S**	(1901) Nina Karlovna BARI (1894) Heinz HOPF (1900) Michail Alekseevich LAVRENTEV
	20	**S**	(1889) Edwin Powell HUBBLE (1924) Benoît MANDELBROT
47	**21**	**M**	(1867) Dimitri SINTSOV
	22	**T**	(1803) Giusto BELLAVITIS (1840) Émile Michel Hyacinthe LEMOINE
	23	**W**	(1820) Issac TODHUNTER (1616) John WALLIS RM070 (1917) Elizabeth Leonard SCOTT RM106
	24	**T**	(1909) Gerhard GENTZEN (1549) Duncan MacLaren Young SOMMERVILLE
	25	**F**	(1873) Claude Louis MATHIEU (1841) Fredrich Wilhelm Karl Ernst SCHRÖDER
	26	**S**	(1946) Enrico BOMBIERI (1894) Norbert WIENER
	27	**S**	(1867) Arthur Lee DIXON
48	**28**	**M**	(1898) John WISHART
	29	**T**	(1803) Christian Andreas DOPPLER (1879) Nikolay Mitrofanovich KRYLOV (1849) Horace LAMB
	30	**W**	(1549) Sir Henry SAVILE (1969) Matilde MARCOLLI RM142

Putnam 1996 - B5

Given a finite string S of symbols X and O, we write $\Delta(S)$ for the number of X's in S minus the number of O's. For example, $\Delta(XOOXOOX)=-1$. We call a string **balanced** if every substring T of (consecutive symbols of) S has $-2\le\Delta(T)\le 2$. Thus, *XOOXOOX* is not balanced, since it contains the substring *OOXOO*. Find, with proof, the number of balanced strings of length n.

Math pickup lines

I hope you know set theory because I want to intersect and union you.

MathJokes4MathyFolks

Why was the math book sad? Because it had so many problems.

A professor is one who can speak on any subject – for precisely fifty minutes.

Norbert WIENER

The British Mathematical Colloquium consists of three days of mathematics with no dogs and no wives.

John Henry Constantine WHITEHEAD

A modern mathematical proof is not very different from a modern machine, or a modern test setup: the simple fundamental principles are hidden and almost invisible under a mass of technical details.

Hermann Klaus Hugo WEYL

Being a language, mathematics may be used not only to inform but also, among other things, to seduce.

The modern physicist is a quantum theorist on Monday, Wednesday, and Friday and a student of gravitational relativity theory on Tuesday, Thursday, and Saturday. On Sunday he is neither, but is praying to his God that someone, preferably himself, will find the reconciliation between the two views.

Benoit MANDELBROT

Algebra is generous: she often gives more than is asked for.

Jean D'ALEMBERT

The history of astronomy is a history of receding horizons.

Edwin HUBBLE

Rudi Mathematici

December

	1	**T**	(1792) Nikolay Yvanovich LOBACHEVSKY	RM083
	2	**F**	(1831) Paul David Gustav DU BOIS-REYMOND (1901) George Frederick James TEMPLE	
	3	**S**	(1924) John BACKUS (1903) Sidney GOLDSTEIN	
	4	**S**	(1795) Thomas CARLYLE	
49	**5**	**M**	(1901) Werner Karl HEISENBERG (1907) Giuseppe OCCHIALINI (1868) Arnold Johannes Wilhelm SOMMERFELD	RM122
	6	**T**	(1682) Giulio Carlo FAGNANO dei Toschi	
	7	**W**	(1647) Giovanni CEVA (1830) Antonio Luigi Gaudenzio Giuseppe CREMONA (1823) Leopold KRONECKER	
	8	**T**	(1508) Regnier GEMMA FRISIUS (1865) Jaques Salomon HADAMARD (1919) Julia Bowman ROBINSON	
	9	**F**	(1917) Sergei Vasilovich FOMIN (1883) Nikolai Nikolaievich LUZIN (1906) Grace Brewster MURRAY HOPPER	
	10	**S**	(1804) Karl Gustav Jacob JACOBI (1815) Augusta Ada KING Countess of LOVELACE	RM059
	11	**S**	(1882) Max BORN	
50	**12**	**M**	(1832) Peter Ludwig Mejdell SYLOW	
	13	**T**	(1724) Franz Ulrich Theodosius AEPINUS (1887) George POLYA	RM131
	14	**W**	(1546) Tycho BRAHE	
	15	**T**	(1802) János BOLYAI	RM083
	16	**F**	(1804) Wiktor Yakovievich BUNYAKOWSKY	
	17	**S**	(1900) Dame Mary Lucy CARTWRIGHT (1835) Felice CASORATI (1706) Gabrielle Emile Le Tonnelier de Breteuil du CHATELET (1842) Marius Sophus LIE	
	18	**S**	(1917) Roger LYNDON	
51	**19**	**M**	(1783) Charles Julien BRIANCHON (1854) Marcel Louis BRILLOUIN (1887) Charles Galton DARWIN	RM138
	20	**T**	(1875) Francesco Paolo CANTELLI (1648) Tommaso CEVA (1494) Oronce FINE	
	21	**W**	(1878) Jan ŁUKASIEWICZ (1932) John Robert RINGROSE	
	22	**T**	(1877) Tommaso BOGGIO (1824) Francesco BRIOSCHI (1859) Otto Ludwig HÖLDER (1887) Srinivasa Aiyangar RAMANUJAN	
	23	**F**	(1872) Georgii Yurii PFEIFFER	
	24	**S**	(1822) Charles HERMITE (1868) Emmanuel LASKER	RM095
	25	**S**	(1642) Isaac NEWTON (1900) Antoni ZYGMUND	RM071
52	**26**	**M**	(1791) Charles BABBAGE (1937) John Horton CONWAY (1780) Mary Fairfax Greig SOMERVILLE	RM059 RM119
	27	**T**	(1654) Jacob (Jacques) BERNOULLI (1571) Johannes KEPLER	RM093
	28	**W**	(1808) Athanase Louis Victoire DUPRÈ (1882) Arthur Stanley EDDINGTON (1903) John von NEUMANN	RM107
	29	**T**	(1856) Thomas Jan STIELTJES	
	30	**F**	(1897) Stanislaw SAKS	
	31	**S**	(1952) Vaughan Frederick Randall JONES (1872) Volodymyr LEVITSKY (1896) Carl Ludwig SIEGEL (1945) Leonard ADLEMAN	RM143

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Let $(a_1,b_1),(a_2,b_2),\ldots,(a_n,b_n)$ be the vertices of a convex polygon which contains the origin in its interior. Prove that there exist positive real numbers x and y such that

$$(a_1b_1)x^{a_1}y^{b_1}+(a_2b_2)x^{a_2}y^{b_2}+\ldots$$
$$+(a_nb_n)x^{a_n}y^{b_n}=(0,0).$$

Math pickup lines

You've got more curves than a triple integral.

MathJokes4MathyFolks

What's Santa Claus multiplied by *i*?

Well, I guess that makes him real.

In mathematics you don't understand things. You just get used to them.

John VON NEUMANN

In order to translate a sentence from English into French two things are necessary. First, we must understand thoroughly the English sentence. Second, we must be familiar with the forms of expression peculiar to the French language. The situation is very similar when we attempt to express in mathematical symbols a condition proposed in words. First, we must understand thoroughly the condition. Second, we must be familiar with the forms of mathematical expression.

George PÒLYA

There is no branch of mathematics, however abstract, which may not some day be applied to phenomena of the real world.

Nikolay Yvanovich LOBACHEVSKY

The shortest path between two truths in the real domain passes through the complex domain.

Jaques Salomon HADAMARD

Mathematical discoveries, like springtime violets in the woods, have their season which no human can hasten or retard.

Janos BOLYAI

An expert is someone who knows some of the worst mistakes that can be made in his subject, and how to avoid them.

Werner Karl HEISENBERG