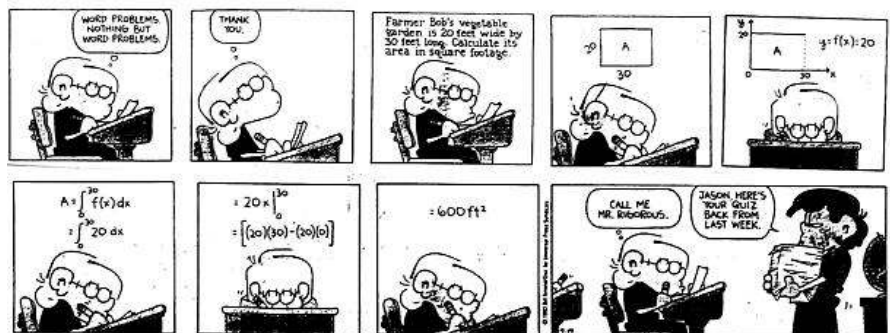
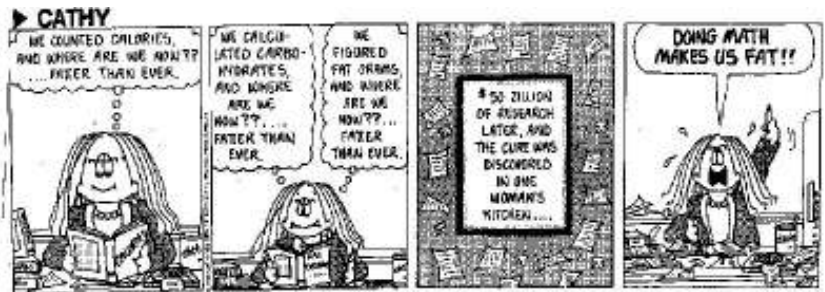




$$x^4 - 8196x^3 + 25188446x^2 - 34402062516x + 17618342436585 = 0$$



1	1	L	(1803) Guglielmo LIBRI Carucci dalla Sommaja (1878) Agner Krarup ERLANG (1894) Satyendranath BOSE (1912) Boris GNEDENKO
	2	M	(1822) Rudolf Julius Emmanuel CLAUSIUS (1905) Lev Genrichovich SHNIRELMAN (1938) Anatoly SAMOILENKO
	3	M	(1917) Yuri Alexeievich MITROPOLSHY
	4	G	(1643) Isaac NEWTON
	5	V	(1838) Marie Ennemond Camille JORDAN (1871) Federigo ENRIQUES (1871) Gino FANO
	6	S	(1807) Jozeph Mitza PETZVAL (1841) Rudolf STURM
	7	D	(1871) Felix Edouard Justin Emile BOREL (1907) Raymond Edward Alan Christopher PALEY
2	8	L	(1888) Richard COURANT (1924) Paul Moritz COHN (1942) Stephen William HAWKING
	9	M	(1864) Vladimir Adreievich STELKOY
	10	M	(1875) Issai SCHUR (1905) Ruth MOUFANG
	11	G	(1545) Guidobaldo DEL MONTE (1707) Vincenzo RICCATI (1784) Achille Pierre Dionis DU SEJOUR
	12	V	(1906) Kurt August HIRSCH
	13	S	(1864) Wilhelm Karl Werner Otto Fritz Franz WIEN (1876) Luther Pfahler EISENHART (1876) Erhard SCHMIDT
	14	D	(1902) Alfred TARSKI
3	15	L	(1704) Johann CASTILLON (1717) Matthew STEWART (1850) Sofia Vasilievna KOVALEVSKAJA
	16	M	(1801) Thomas KLAUSEN
	17	M	(1847) Nikolay Egorovich ZUKOWSKY (1858) Gabriel KOENIGS
	18	G	(1856) Luigi BIANCHI (1880) Paul EHRENFEST
	19	V	(1813) Rudolf Friedrich Alfred CLEBSCH (1879) Guido FUBINI (1908) Aleksandr Gennadievich KUROK
	20	S	(1775) Andre Marie AMPERE (1895) Gabor SZEGO (1904) Renato CACCIOPPOLI
	21	D	(1846) Pieter Hendrik SCHOUTE (1915) Yuri Vladimirovich LINNIK
4	22	L	(1592) Pierre GASSENDI (1908) Lev Davidovich LANDAU
	23	M	(1840) Ernst ABBE (1862) David HILBERT
	24	M	(1891) Abram Samoilovitch BESICOVITCH (1914) Vladimir Petrovich POTAPOV
	25	G	(1627) Robert BOYLE (1736) Joseph-Louis LAGRANGE (1843) Karl Herman Amandus SCHWARTZ
	26	V	(1799) Benoit Paul Emile CLAPEYRON
	27	S	(1832) Charles Lutwidge DODGSON
	28	D	(1701) Charles Marie de LA CONDAMINE (1892) Carlo Emilio BONFERRONI
5	29	L	(1817) William FERREL (1888) Sidney CHAPMAN
	30	M	(1619) Michelangelo RICCI
	31	M	(1715) Giovanni Francesco FAGNANO dei Toschi (1841) Samuel LOYD (1896) Sofia Alexandrovna JANOWSKAJA

18th USAMO – 1989

Per ogni intero positivo n , sia

$$S_n = \sum_{i=1}^n \frac{1}{i};$$

$$T_n = \sum_{i=1}^n S_i;$$

$$U_n = \sum_{i=1}^n \frac{T_i}{i+1}.$$

trovate, con prova, gli interi $0 < a, b, c, d < 1000000$ tali che

$$T_{1988} = aS_{1989} - b \text{ e } U_{1988} = cS_{1989} - d$$

Il Meraviglioso Mondo della Statistica

- I Giapponesi mangiano pochissimi grassi e hanno meno attacchi di cuore rispetto agli Inglesi o agli Americani.
- I Francesi mangiano moltissimi grassi e hanno meno attacchi di cuore rispetto agli Inglesi o agli Americani.
- I Giapponesi bevono pochissimo vino rosso e hanno meno attacchi di cuore rispetto agli Inglesi o agli Americani.
- Gli Italiani bevono moltissimo vino rosso e hanno meno attacchi di cuore rispetto agli Inglesi o agli Americani.

Conclusione: mangia e bevi quanto ti pare: è la lingua inglese, che fa venire gli attacchi di cuore.

‘O roscopo

Il Sole entra nella costellazione del **Capricorno** il 21; i nati in questo periodo insistono nel dimostrare statisticamente che gli astrologi non hanno capito niente.

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

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

David HILBERT
"A mathematician's reputation rests on the number of bad proofs he has given"

Abram BESICOVITCH

5	1	G	(1900) John Charles BURKILL
	2	V	(1522) Lodovico FERRARI
	3	S	(1893) Gaston Maurice JULIA
	4	D	(1905) Eric Christopher ZEEMAN
6	5	L	(1757) Jean Marie Constant DUHAMEL
	6	M	(1612) Antoine ARNAUD (1695) Nicolaus (II) BERNOULLI
	7	M	(1877) Godfried Harold HARDY (1883) Eric Temple BELL
	8	G	(1700) Daniel BERNOULLI (1875) Francis Ysidro EDGEWORTH
	9	V	(1775) Farkas Wolfgang BÖLYAI (1907) Harold Scott Mac Donald COXETER
	10	S	(1747) Aida YASUAKI
	11	D	(1800) William Henry Fox TALBOT (1839) Josiah Willard GIBBS (1915) Richard Wesley HAMMING
7	12	L	(1914) Hanna CAEMMERER NEUMANN
	13	M	(1805) Johann Peter Gustav Lejeune DIRICHLET
	14	M	(1468) Johann WERNER (1849) Hermann HANKEL (1896) Edward Artur MILNE
	15	G	(1564) Galileo GALILEI (1861) Alfred North WHITEHEAD (1946) Douglas HOFSTADTER
	16	V	(1822) Francis GALTON (1853) Georgio RICCI-CURBASTRO (1903) Beniamino SEGRE
	17	S	(1890) Sir Ronald Aymler FISHER (1891) Adolf Abraham Halevi FRAENKEL
	18	D	(1404) Leon Battista ALBERTI
	8	19	L
20		M	(1844) Ludwig BOLTZMANN
21		M	(1591) Girard DESARGUES (1915) Evgenni Michailovitch LIFSHITZ
22		G	(1903) Frank Plumpton RAMSEY
23		V	(1583) Jean-Baptiste MORIN (1951) Shigefumi MORI
24		S	(1871) Felix BERNSTEIN
25		D	(1827) Henry WATSON
9		26	L
	27	M	(1881) Luitzen Egbertus Jan BROUWER
	28	M	(1735) Alexandre Theophile VANDERMONDE (1860) Herman HOLLERITH

18th USAMO – 1989

I 20 membri di un club di tennis hanno schedato esattamente 14 partite di singolo in cui ogni socio gioca almeno in una partita. Provate che all'interno di questo torneo deve esserci un insieme di 6 giochi con 12 giocatori distinti.

Il Meraviglioso Mondo della Statistica

Ogni volta che avete il 50% di probabilità di fare la cosa giusta, c'è il 90% di probabilità che facciate la cosa sbagliata.

'O roscopo

Il Sole entra nella costellazione dell'Acquario il 16; i nati in questo periodo sono convinti che gli astrologi perseguitino solo loro.

"Common sense is not really so common"

Antoine ARNAUD
"Archimedes will be remembered when Aeschylus is forgotten, because languages die and mathematical ideas do not. "Immortality" may be a silly word, but probably a mathematician has the best chance of whatever it may mean."

Godfried HARDY
"it would be better for the true physics if there were no mathematicians on earth"

Daniel BERNOULLI
"Epur si muove"

Galileo GALILEI
"Euler calculated without effort, just as men breathe, as eagles sustain themselves in the air"

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

Willard GIBBS
Whenever you can, count.

Francis GALTON

9	1	G	(1611) John PELL	
	2	V	(1836) Julius WEINGARTEN	
	3	S	(1838) George William HILL (1845) Georg CANTOR	
	4	D	(1822) Jules Antoine LISSAJUS	
10	5	L	(1512) Gerardus MERCATOR (1759) Benjamin GOMPERTZ (1817) Angelo GENOCCHI	
	6	M	(1866) Ettore BORTOLOTTI	
	7	M	(1792) William HERSCHEL (1824) Delfino CODAZZI	
	8	G	(1851) George CHRYSAL	
	9	V	(1818) Ferdinand JOACHIMSTHAL (1900) Howard Hathaway ARKEN	
	10	S	(1864) William Fogg OSGOOD	
11	11	D	(1811) Urbain Jean Joseph LE VERRIER (1853) Salvatore PINCHERLE	
	12	L	(1685) George BERKELEY (1824) Gustav Robert KIRKHHOFF (1859) Ernesto CESARO	
11	13	M	(1861) Jules Joseph DRACH (1957) Rudy D'ALEMBERT	
	14	M	(1864) Jozef KURSCHAK (1879) Albert EINSTEIN	
	15	G	(1860) Walter Frank Raphael WELDON (1868) Grace CHISOLM YOUNG	
	16	V	(1750) Caroline HERSCHEL (1789) Georg Simon OHM (1846) Magnus Gosta MITTAG-LEFFLER	
	17	S	(1876) Ernest Benjamin ESCLANGON (1897) Charles FOX	
	18	D	(1640) Philippe de LA HIRE (1690) Christian GOLDBACH (1796) Jacob STEINER	
	12	19	L	(1862) Adolf KNESER (1910) Jacob WOLFOVITZ
		20	M	(1840) Franz MERTENS (1884) Philip FRANCK (1938) Sergi Petrovich NOVIKOV
12	21	M	(1768) Jean Baptiste Joseph FOURIER (1884) George David BIRKHOFF	
	22	G	(1917) Irving KAPLANSKY	
	23	V	(1754) Georg Freiherr von VEGA (1882) Emmy Amalie NOETHER (1897) John Lighton SYNGE	
	24	S	(1809) Joseph LIOUVILLE (1948) Sun-Yung (Alice) CHANG	
	25	D	(1538) Christopher CLAUDIUS	
	13	26	L	(1848) Konstantin ADREEV (1913) Paul ERDOS
		27	M	(1857) Karl PEARSON
28		M	(1749) Pierre Simon de LAPLACE	
29		G	(1825) Francesco FAA' DI BRUNO (1873) Tullio LEVI-CIVITA (1896) Wilhelm ACKERMAN	
30		V	(1892) Stefan BANACH	
31		S	(1596) Rene DESCARTES	

18th USAMO – 1989

Sia $P(z) = z^n + c_1 z^{n-1} + \dots + c_n$ un polinomio nella variabile complessa z , con coefficienti reali c_k . Supponiamo inoltre che $\|P(i)\| < 1$.

Provate che esistono due numeri reali a e b tali che $P(a + bi) = 0$ e $(a^2 + b^2 + 1)^2 < 4b^2 + 1$.

Il Meraviglioso Mondo della Statistica

Una recente statistica afferma che 3 persone su 4 appartengono al 75% della popolazione mondiale.

Oroscopo

Il Sole entra nella costellazione dei Pesci il 12; i nati in questo periodo lasciano parlare l'astrologo per tre ore e poi dicono "Eh? Ero distratto..."

"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
"We [he and Halmos] share a philosophy about linear algebra: we think basis-free, we write basis-free, but when the chips are down we close the office door and compute with matrices like fury."

Irving KAPLANSKY
"A Mathematician is a machine for turning coffee into theorems."

Paul ERDOS
"What we know is not much. What we do not know is immense."

Pierre Simon de LAPLACE

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

18th USAMO – 1989

Sia ABC un triangolo acutangolo per cui le lunghezze dei lati soddisfano la disuguaglianza $AB < BC < AC$. Se il punto I è il centro del cerchio inscritto del triangolo ABC e il punto O è il centro del cerchio circoscritto, provate che la retta passante per IO interseca i segmenti AB e BC .

Il Meraviglioso Mondo della Statistica

Due mesi in laboratorio possono farti risparmiare due ore in biblioteca.

‘O roscopo

Il Sole entra nella costellazione dell'Ariete il 18; i nati in questo periodo cercano sempre di convincere l'astrologo di aver torto ma, contrariamente al caso del Capricorno, di solito finisce a botte.

I will stop here.

Andrew WILES

"The notion of a set is too vague for the continuum hypothesis to have a positive or negative answer."

Paul Joseph COHEN

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

Stanislaw Marcin ULAM

"You treat world history as a mathematician does mathematics, in which nothing but laws and formulae exist, no reality, no good and evil, no time, no yesterday, no tomorrow, nothing but an eternal shallow, mathematical present."

Otto Ludwig HESSE

"An important scientific innovation rarely makes its way by gradually winning over and converting its opponents: it rarely happens that Saul becomes Paul. What does happen is that its opponents gradually die out, and that the growing generation is familiarised with the ideas from the beginning"

Max Karl Ernst Ludwig PLANCK

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

Felix KLEIN

"The fact that the author thinks slowly is not serious, but the fact that he publishes faster than he thinks is inexcusable."

Wolfgang PAULI

18	1	M	(1825) Johann Jacob BALMER	
	2	M	(1860) D'Arcy Wentworth THOMPSON (1905) Kazimierz ZARANKIEWITZ	
	3	G	(1842) Otto STOLZ (1860) Vito VOLTERRA	
	4	V	(1845) William Kingdon CLIFFORD	
	5	S	(1833) Lazarus Emmanuel FUCHS (1897) Francesco Giacomo TRICOMI	
	6	D	(1872) Willem DE SITTER (1906) Andre' VEIL	
19	7	L	(1926) Alexis Claude CLAIRAUT (1854) Giuseppe VERONESE (1881) Ebenezer CUNNINGHAM (1896) Pavel Sergeievich ALEXANDROV	
	8	M	(1859) Johan Ludwig Wilhelm Valdemar JENSEN	
	9	M	(1746) Gaspard MONGE (1876) Gilbert Ames BLISS	
	10	G	(1788) Augustin Jean FRESNEL (1847) William Karl Joseph KILLING (1958) Piotr Rizerovich SILVERBRAHMS	
	11	V	(1918) Richard Phillips FEYNMAN	
	12	S	(1845) Pierre Rene' Jean Baptiste Henry BROCARD (1902) Frank YATES	
	13	D	(1750) Lorenzo MASCHERONI	
	20	14	L	(1832) Rudolf Otto Sigismund LIPSCHITZ (1863) John Charles FIELDS
		15	M	(1939) Brian HARTLEY
		16	M	(1718) Maria Gaetana AGNESI (1821) Pafnuti Lvovi CHEBYSHEV
		17	G	(1940) Alan KAY
18		V	(1850) Oliver HEAVISIDE (1892) Bertrand Arthur William RUSSELL	
19		S	(1919) Georgii Dimitrievich SUVOROV	
20		D	(1861) Henry Seely WHITE	
21		21	L	(1471) Albrecht DURER (1792) Gustave Gaspard de CORIOLIS
		22	M	(1865) Alfred Cardew DIXON
		23	M	(1914) Lipa BERS
	24	G	(1544) William GILBERT	
	25	V	(1838) Karl Mikailovich PETERSON	
	26	S	(1667) Abraham DE MOIVRE (1896) Yuri Dimitrievich SOKOLOV	
	27	D	(1862) John Edward CAMPBELL	
	22	28	L	(1676) Jacopo Francesco RICCATI (1710) Johann (II) BERNOULLI
29		M	(1882) Harry BATEMAN	
30		M	(1814) Eugene Charles CATALAN	
31		G	(1926) John KEMENY	

25th USAMO – 1996

Provate che la media dei numeri $n \sin n$ è $\cot 1$ (angoli in gradi)

Il Meraviglioso Mondo della Statistica

Quanti statistici sono necessari per cambiare una lampadina?

Uno (più o meno tre).

‘O roscopo

Il Sole entra nella costellazione del Toro il 15; i nati in questo periodo sono convinti che con la logica prima o poi gli astrologi lo capiranno, di non aver capito niente.

"Nature is not embarrassed by difficulties of analysis."

Augustin Jean FRESNEL
"Now one may ask, "What is mathematics doing in a physics lecture?" We have several possible excuses: first, of course, mathematics is an important tool, but that would only excuse us for giving the formula in two minutes. On the other hand, in theoretical physics we discover that all our laws can be written in mathematical form; and that this has a certain simplicity and beauty about it. But the real reason is that the subject is enjoyable, and although we humans cut nature up in different ways, and we have different courses in different departments, such compartmentalization is really artificial, and we should take our intellectual pleasures where we find them."

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 $e^{\pi} + 1 = 0$ are poems."

Lipa BERS

22	1	V	(1796) Sadi Leonard Nicolas CARNOT (1851) Edward Bailey ELLIOTT (1899) Edward Charles TITCHMARSH	
	2	S	(1895) Tibor RADO'	
	3	D	(1659) David GREGORY	
23	4	L	(1809) John Henry PRATT	
	5	M	(1814) Pierre Laurent WANTZEL (1819) John Couch ADAMS	
	6	M	(1436) Johann Muller REGIOMONTANUS (1857) Aleksandr Michailovitch LYAPUNOV (1906) Max ZORN	
	7	G	(1868) Edward Burr VAN VLECK	
	8	V	(1625) Giovanni Domenico CASSINI (1858) Charlotte Angus SCOTT (1860) Alicia Boole STOTT	
	9	S	(1885) John Edensor LITTLEWOOD	
	10	D	(1940) Mohammad ABU'L Wafa Al-Buzjani (1887) Vladimir Ivanovich SMIRNOV	
	24	11	L	(1937) David Bryant MUMFORD
	12	M	(1888) Zygmunt JANYSZEWSKI	
	13	M	(1831) James Clerk MAXWELL (1876) William Sealey COSSET (Student) (1928) John Forbes NASH	
14	G	(1736) Charles Augustin de COULOMB (1856) Andrei Andreyevich MARKOV (1903) Alonzo CHURCH		
15	V	(1640) Bernard LAMY (1894) Nikolai Gregorievich CHEBOTARYOV		
16	S	(1915) John Wilder TUKEY		
17	D	(1898) Maurits Cornelius ESCHER		
25	18	L	(1858) Andrew Russell FORSYTH (1884) Charles Ernest WEATHERBURN	
	19	M	(1623) Blaise PASCAL (1902) Wallace John ECKERT	
	20	M	(1873) Alfred LOEWY	
	21	G	(1781) Simeon Denis POISSON (1828) Giuseppe BRUNO	
	22	V	(1823) Mario PIERI (1864) Hermann MINKOWSKY (1910) Konrad ZUSE	
	23	S	(1912) Alan Mathison TURING	
	24	D	(1880) Oswald VEBLEN	
	26	25	L	(1908) William Van Orman QUINE
26	M	(1824) William THOMSON, Lord Kelvin (1918) Yudell Leo LUKE		
27	M	(1806) Augustus DE MORGAN		
28	G	(1875) Henri Leon LEBESGUE		
29	V	(1888) Aleksandr Aleksandrovich FRIEDMANN		
30	S	(1791) Felix SAVART		

25th USAMO – 1996

Per un insieme non vuoto S di numeri reali, sia $\sigma(S)$ la somma degli elementi di S . Dato un insieme A di n interi positivi, consideriamo la collezione di tutte le somme distinte $\sigma(S)$ al variare di S sugli insiemi non vuoti di A . Provate che questa collezione di somme può essere partizionata in n classi tali che in ogni classe il rapporto tra la somma più grande e la più piccola non è maggiore di 2.

Il Meraviglioso Mondo della Statistica

Uno statistico è un ragioniere senza il carisma

'O roscopo

Il Sole entra nella costellazione dei Gemelli il 21; i nati in questo periodo chiedono all'astrologo quale dei due sia nato prima, il barbone o il commendatore.

Do not imagine that mathematics is hard and crabbed, and repulsive to common sense. It is merely the etherialization of common sense.

William THOMSON (Lord Kelvin)
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
"It can be of no practical use to know that π is irrational, but if we can know, it surely would be intolerable not to know."

Edward Charles TITCHMARSH
"What I give form to in daylight is only one per cent of what I have seen in darkness"

Maurits Cornelius ESCHER
"The more I see of men, the better I like my dog"

Blaise PASCAL
"Science is a differential equation. Religion is a boundary condition"

Alan Mathison TURING
"In my opinion, a mathematician, in so far as he is a mathematician, need not preoccupy himself with philosophy -- an opinion, moreover, which has been expressed by many philosophers."

Henri LEBESGUE

26	1	D	(1643) Gottfried Wilhelm von LEIBNIZ (1788) Jean Victor PONCELET
27	2	L	(1820) William John Racquorn RANKINE (1852) William BURNSIDE
	3	M	(1807) Ernest Jean Philippe Fauque de JONQUIERE (1897) Jesse DOUGLAS
	4	M	(1906) Daniel Edwin RUTHERFORD (1917) Michail Samuilovich LIVSIC
	5	G	(1936) James MIRRLEES
	6	V	(1849) Alfred Bray KEMPE
	7	S	(1816) Johann Rudolf WOLF (1906) William FELLER (1922) Vladimir Aleksandrovich MARCHENKO
	8	D	(1760) Christian KRAMP
	28	9	L
10		M	(1862) Roger COTES (1868) Oliver Dimon KELLOGG
11		M	(1857) Sir Joseph LARMOR (1890) Giacomo ALBANESE
12		G	(1875) Ernest Stigismund FISCHER (1895) Richard BUCKMINSTER FULLER
13		V	(1527) John DEE (1741) Karl Friedrich HINDENBURG
14		S	
15		D	(1865) Wilhelm WIRTINGER (1906) Adolph Andrej Pavlovich YUSHKEVICH
29	16	L	(1678) Jakob HERMANN (1903) Irmgard FLUGGE-LOTZ
	17	M	(1831) Victor Mayer Amedee' MANNHEIM (1837) Wilhelm LEXIS
	18	M	(1013) Hermann von REICHENAU (1635) Robert HOOKE (1853) Hendrich Antoon LORENTZ
	19	G	(1768) Francois Joseph SERVOIS
	20	V	
	21	S	(1620) Jean PICARD (1848) Emil WEYR (1849) Robert Simpson WOODWARD
	22	D	(1784) Friedrich Wilhelm BESSEL
30	23	L	(1775) Etienne Louis MALUS (1854) Ivan SLEZYNSKY
	24	M	(1851) Friedrich Herman SCHOTTKY (1871) Paul EPSTEIN (1923) Christine Mary HAMILL
	25	M	(1808) Johann Benedict LISTING
	26	G	(1903) Kurt MAHLER
	27	V	(1667) Johann BERNOULLI (1801) George Biddel AIRY (1848) Lorand Baron von EOTVOS (1871) Ernst Friedrich Ferdinand ZERMELO
	28	S	(1954) Gerd FALTINGS
	29	D	(1898) Isidor Isaac RABI
31	30	L	(1889) Vladimir Kosma ZWORYKN
	31	M	(1704) Gabriel CRAMER (1712) Johann Samuel KOENIG

25th USAMO – 1996

Sia ABC un triangolo. Provate che esiste una linea ℓ nel piano del triangolo ABC tale che l'intersezione dell'interno del triangolo ABC e dell'interno del triangolo $A'B'C'$ riflessione di ABC secondo ℓ ha un'area maggiore dei $2/3$ dell'area del triangolo ABC .

Il Meraviglioso Mondo della Statistica

La Teoria e la Pratica sono in teoria la stessa cosa. In pratica, sono diverse.

'Oroscopo

Il Sole entra nella costellazione del **Cancro** il 20; i nati in questo periodo lasciano parlare l'astrologo tre ore, poi dicono "No" e gli lasciano il conto da pagare.

"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
"There is (gentle reader) nothing (the works of God only set apart) which so much beautifies and adorns the soul and mind of man as does knowledge of the good arts and sciences. ... Many ... arts there are which beautify the mind of man; but of all none do more garnish and beautify it than those arts which are called mathematical, unto the knowledge of which no man can attain, without perfect knowledge and instruction of the principles, grounds, and Elements of Geometry."

John DEE

"CEIHOSSOTTUU"

Anagram to establish priority in the discovery of elasticity: *"Ut tensio, sic uis"*

Robert HOOKE
"[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

"A quantity which is increased or decreased by an infinitely small quantity is neither increased nor decreased."

Johann BERNOULLI

31	1	M	(1861) Ivar Otto BENDIXSON (1881) Otto TOEPLITZ
	2	G	(1856) Ferdinand RUDIO (1902) Mina Spiegel REES
	3	V	(1914) Mark KAC
	4	S	(1805) Sir William Rowan HAMILTON (1838) John VENN
	5	D	(1802) Niels Henrik ABEL
32	6	L	(1638) Nicolas MALEBRANCHE (1741) John WILSON
	7	M	(1868) Ladislaus Josephowitsch BORTKIEWITZ
	8	M	(1902) Paul Adrien Maurice DIRAC
	9	G	(1537) Francesco BAROZZI (Franciscus Barocius)
	10	V	(1602) Gilles Personne de ROBERVAL
	11	S	(1730) Charles BOSSUT (1842) Enrico D'OVIDIO
	12	D	(1882) Jules Antoine RICHARD (1887) Erwin Rudolf Josef Alexander SCHRODINGER
33	13	L	(1625) Erasmus BARTHOLIN (1819) George Gabriel STOKES (1861) Cesare BURALLI-FORTI
	14	M	(1530) Giovanni Battista BENEDETTI (1842) Jean Gaston DARBOUX (1865) Guido CASTELNUOVO (1866) Charles Gustave Nicolas de la VALLEE POUSSIN
	15	M	(1863) Aleksei Nikolaevich KBYLOV (1892) Louis Pierre Victor duc de BROGLIE (1901) Petr Sergeevich NOVIKOV
	16	G	(12773) Louis Beniamin FRANCOEUR (1821) Arthur CAYLEY
	17	V	(1601) Pierre de FERMAT
	18	S	(1685) Brook TAYLOR
	19	D	(1646) John FLAMSTEED (1739) Georg Simon KLUGEL
34	20	L	(1710) Thomas SIMPSON (1863) Corrado SEGRE (1882) Wacław SIERPINSKI
	21	M	(1789) Augustin Louis CAUCHY
	22	M	(1647) Denis PAPIN
	23	G	(1683) Giovanni POLENI (1829) Moritz Benedikt CANTOR
	24	V	(1561) Bartholomeo PITISCUS (1942) Karen Keskulla UHLENBECK
	25	S	(1561) Philip van LANSBERGE (1844) Thomas MUIR
	26	D	(1728) Johann Heinrich LAMBERT (1875) Giuseppe VITALI
35	27	L	(1858) Giuseppe PEANO
	28	M	(1796) Irenee Jules BIENAYME
	29	M	(1904) Leonard ROTH
	30	G	(1856) Carle David Tolme RUNGE (1906) Olga TAUSSKY-TODD
	31	V	(1821) Hermann Ludwig Ferdinand von HELMHOLTZ

25th USAMO – 1996

Una sequenza di n termini (x_1, x_2, \dots, x_n) in cui ogni termine vale 0 o 1 è chiamata *sequenza binaria di lunghezza n* . Sia a_n il numero delle sequenze binarie di lunghezza n che non contengono tre termini consecutivi uguali a 0,1,0 in quest'ordine. Sia b_n il numero delle sequenze binarie di lunghezza n che non contengono quattro termini consecutivi pari a 0,0,1,1 o 1,1,0,0 in quest'ordine. Provatte che $b_{n+1} = 2a_n$ per qualsiasi intero positivo n .

Il Meraviglioso Mondo della Statistica

Ogni giorno, l'analfabetismo matematico colpisce 8 persone su 5.

O roscopo

Il Sole entra nella costellazione del **Leone** l'11; i nati in questo periodo sono fieri del fatto di non aver ancora trovato un oroscopo che ci azzechi.

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 SCHROEDINGER

The whole form of mathematical thinking was created by Euler. It is only with the greatest of difficulty that one is able to follow the writings of any author preceding Euler, because it was not yet known how to let the formulas speak for themselves. This art Euler was the first to teach.

Edward RUDIO

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

Mark KAC

"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

"Cubum autem in duos cubos, aut quadratoquadratum in duos quadratoquadratos, et generaliter nullam in infinitum ultra quadratum potestatem in duos ejusdem nominis fas est dividere: cujus rei demonstrationem mirabilem sane detexi. Hanc marginis exiguitas non caperet"

Pierre de FERMAT

"Newton is, of course, the greatest of all Cambridge professors; he also happens to be the greatest disaster that ever befell not merely Cambridge mathematics in particular, but British mathematical science as a whole"

Leonard ROTH

35	1	S	(1659) Joseph SAURIN (1835) William Stankey JEVONS	
	2	D	(1878) Maurice Rene' FRECHET (1923) Rene' THOM	
36	3	L	(1814) James Joseph SYLVESTER (1884) Solomon LEFSCHETZ (1908) Lev Semenovich PONTRYAGIN	
	4	M	(1809) Luigi Federico MENABREA	
	5	M	(1667) Giovanni Girolamo SACCHERI (1725) Jean Etienne MONTUCLA	
	6	G	(1859) Boris Jakovlevich BUKREEV (1863) Dimitri Aleksandrovich GRAVE	
	7	V	(1707) George Louis Leclerc comte de BUFFON (1955) Efim ZELMANOV	
	8	S	(1584) Gregorius SAINT-VINCENT (1588) Marin MERSENNE	
	9	D	(1860) Frank MORLEY	
	37	10	L	(1839) Charles Sanders PEIRCE
		11	M	(1623) Stefano degli ANGELI (1877) sir James Hopwood JEANS
12		M	(1891) Antoine Andre' Louis REYNAUD (1900) Haskell Brooks CURRY	
13		G	(1873) Constantin CARATHEODORY (1885) Wilhelm Johann Eugen BLASCHKE	
14		V	(1858) Henry Burchard FINE (1891) Ivan Matveevich VINOGRADOV	
15		S	(973) Abu Arrayhan Muhammad ibn Ahmad AL BIRUMI (1886) Paul Pierre LEVY	
16		D	(1494) Francisco MAUROLICO (1736) Johann Nikolaus TETENS	
38		17	L	(1743) Marie Jean Antoine Nicolas de Caritat de CONDORCET (1826) Georg Friedrich Bernhard RIEMANN
	18	M	(1752) Adrien Marie LEGENDRE	
	19	M	(1749) Jean Baptiste DELAMBRE	
	20	G	(1842) Alexander Wilhelm von BRILL (1861) Frank Nelson COLE	
	21	V	(1899) Juliusz Pawel SCHAUDER	
	22	S	(1765) Paolo RUFFINI (1769) Louis PUISSANT (1808) Jaques Charles Francois STURM	
	23	D	(1768) William WALLACE (1900) David van DANTZIG	
	39	24	L	(1501) Girolamo CARDANO (1625) Johan DE WITT (1801) Michail Vasilevich OSTROGRADSKI
25		M	(1819) George SALMON (1888) Stefan MAZURKIEWICZ	
26		M	(1688) Willem Jakob `s GRAVESANDE (1854) Percy Alexander MACMAHON (1891) Hans REICHENBACH	
27		G	(1855) Paul Emile APPEL (1876) Earle Raymond HEDRICK (1919) James Hardy WILKINSON	
28		V	(1698) Pierre Louis Moreau de MAUPERTUIS (1761) Ferdinand Francois Desire' Budan de BOISLAURENT (1873) Julian Lowell COOLIDGE	
29		S	(1561) Adriaan van ROOMEN (1812) Adolph GOPEL	
30		D	(1775) Robert ADRAIN (1829) Joseph WOLSTENHOLME (1883) Ernst HELLINGER	

25th USAMO – 1996

Il triangolo ABC gode della proprietà che esiste un punto P interno al triangolo per cui $\angle PAB = 10^\circ$, $\angle PBA = 20^\circ$, $\angle PCA = 30^\circ$ e $\angle PAC = 40^\circ$. Provate che il triangolo ABC è isoscele.

Il Meraviglioso Mondo della Statistica

Statistica significa non dover mai dire "Sono sicuro".

'O roscopò

Il Sole entra nella costellazione della **Vergine** il 17; i nati in questo periodo sostengono che daranno retta agli astrologi quando metteranno un po' d'ordine nella precessione degli equinozi.

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

René THOM
Let us assume that the three dimensions of space are visualized in the customary fashion, and let us substitute a color for the fourth dimension. Every physical object is liable to changes in color as well as in position. An object might, for example, be capable of going through all shades from red through violet to blue. A physical reaction between any two bodies is possible only if they are close to each other in space as well as in color. Bodies of different colors would penetrate each other without interference ... If we lock a number of flies into a red glass globe, they may yet escape: they may change their color from red to blue and are then able to penetrate the red globe.

Hans REICHENBACH
"The importance of the "New Mathematics" lies mainly in the fact that it has taught us the difference between the disc and the circle."

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

Hans REICHENBACH
[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

40	1	L	(1671) Luigi Guido GRANDI (1898) Bela KEREKJARTO	
	2	M	(1825) John James WALKER (1908) Arthur ERDELYI	
	3	M	(1944) Pierre Rene' DELIGNE	
	4	G	(1759) Louis Francois Antoine ARBOGAST (1797) Jerome SAVARY	
	5	V	(1732) Nevil MASKELYNE (1781) Bernhard Placidus Johann Nepomuk BOLZANO (1861) Thomas Little HEATH	
	6	S	(1552) Matteo RICCI (1831) Julius Wilhelm Richard DEDEKIND (1908) Sergei Lvovich SOBOLEV	
	7	D	(1885) Niels BOHR	
41	8	L	(1908) Hans Arnold HEILBRONN	
	9	M	(1581) Claude Gaspard BACHET de Meziriac (1704) Johann Andrea von SEGNER (1873) Karl SCHWARTZSCHILD	
	10	M	(1861) Heinrich Friedrich Karl Ludwig BURKHARDT	
	11	G	(1675) Samuel CLARKE (1777) Barnabe BRISSON (1885) Alfred HAAR (1910) Cahit ARF	
	12	V	(1860) Elmer SPERRY	
	13	S	(1890) Georg FEIGL (1893) Kurt Werner Friedrich REIDEMEISTER (1932) John Griggs THOMSON	
	14	D	(1687) Robert SIMSON (1801) Joseph Antoine Ferdinand PLATEAU (1868) Alessandro PADOA	
42	15	L	(1608) Evangelista TORRICELLI (1735) Jesse RAMSDEN (1776) Peter BARLOW	
	16	M	(1879) Philip Edward Bertrand JOURDAIN	
	17	M	(1759) Jacob (II) BERNOULLI (1888) Paul Isaac BERNAYS	
	18	G	(1741) John WILSON	
	19	V	(1903) Jean Frederic Auguste DELSARTE (1910) Subrahmanyan CHANDRASEKHAR	
	20	S	(1632) Sir Christopher WREN (1863) William Henry YOUNG (1865) Aleksandr Petrovich KOTELNIKOV	
	21	D	(1677) Nicolaus (I) BERNOULLI (1823) Enrico BETTI (1855) Giovan Battista GUCCIA (1893) William LEonard FERRAR	
	43	22	L	(1587) Joachim JUNGIUS (1895) Rolf Herman NEVANLINNA (1907) Sarvadaman CHOWLA
		23	M	(1865) Piers BOHL
		24	M	(1804) Wilhelm Eduard WEBER (1873) Edmund Taylor WITTAKER
25		G	(1811) Evariste GALOIS	
26		V	(1849) Ferdinand Georg FROBENIUS (1857) Charles Max MASON (1911) Shiing-Shen CHERN	
27		S	(1678) Pierre Remond de MONTMORT (1856) Ernest William HOBSON	
28		D	(1804) Pierre Francois VERHULST	
44		29	L	(1925) Klaus ROTH
	30	M	(1906) Andrej Nikolaevich TIKHONOV	
	31	M	(1815) Karl Theodor Wilhelm WEIERSTRASS	

25th USAMO – 1996

Determinate con prova se esiste un sottoinsieme X degli interi con la proprietà che per ogni intero n esiste una ed una sola soluzione dell'equazione $a + 2b = n$, con $a, b \in X$.

Il Meraviglioso Mondo della Statistica

Se volete tre opinioni, chiedete a due statistici.

'O roscopo

Il Sole entra nella costellazione della Bilancia il 30; i nati in questo periodo sostengono che ci dovrebbero essere più pianeti, il che non manca di lasciare perplesso l'astrologo.

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

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
"The Council of the Royal Society is a collection of men who elect each other to office and then dine together at the expense of this society to praise each other over wine and give each other medals."

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

Karl Theodor Wilhelm WEIERSTRASS

44	1	G	(1535) Giambattista DELLA PORTA	
	2	V	(1815) George BOOLE	
	3	S	(1867) Martin Wilhelm KUTTA (1878) Arthur Byron COBLE	
	4	D	(1744) Johann (III) BERNOULLI (1865) Pierre Simon GIRARD	
45	5	L	(1848) James Whitbread Lee GLAISHER (1930) John Frank ADAMS	
	6	M	(1781) Giovanni Antonio Amedeo PLANA	
	7	M	(1660) Thomas Fantet DE LAGNY (1799) Karl Heinrich GRAFFE (1898) Raphael SALEM	
	8	G	(1656) Edmond HALLEY (1846) Eugenio BERTINI (1848) Friedrich Ludwig Gottlob FREGE (1854) Johannes Robert RYDBERG (1869) Felix HAUSDORFF	
	9	V	(1847) Carlo Alberto CASTIGLIANO (1885) Theodor Franz Eduard KALUZA (1885) Hermann Klaus Hugo WEYL (1906) Jaroslav Borisovich LOPATYNSKY (1922) Imre LAKATOS	
	10	S	(1829) Helwin Bruno CHRISTOFFEL	
	11	D	(1904) John Henry Constantine WHITEHEAD	
	46	12	L	(1825) Michail Egorovich VASHCHENKO-ZAKHARCHENKO (1842) John William STRUTT Lord RAYLEIGH (1927) Yutaka TANIYAMA
		13	M	(1876) Ernest Julius WILKZYNSKY (1878) Max Wilhelm DEHN
		14	M	(1845) Ulisse DINI
15		G	(1688) Louis Bertrand CASTEL (1793) Michel CHASLES (1794) Franz Adolph TAURINUS	
16		V	(1835) Eugenio BELTRAMI	
17		S	(1597) Henry GELLIBRAND (1717) Jean Le Rond D'ALEMBERT (1790) August Ferdinand MOBIUS	
18		D	(1872) Giovanni Enrico Eugenio VACCA (1927) Jon Leslie BRITTON	
47		19	L	(1894) Heinz HOPF (1900) Michail Alekseevich LAVRENTEV (1901) Nina Karlovna BARI
	20	M	(1889) Edwin Powell HUBBLE (1924) Benoit MANDELBROT	
	21	M	(1867) Dimjtri SINTSOV	
	22	G	(1803) Giusto BELLAVITIS (1840) Emile Michel Hyacinte LEMOINE	
	23	V	(1616) John WALLIS (1820) Issac TODHUNTER	
	24	S	(1549) Duncan MacLaren Young SOMERVILLE (1909) Gerhard GENTZEN	
	25	D	(1873) Claude Louis MATHIEU (1841) Friedrich Wilhelm Karl Ernst SCHRODER	
	48	26	L	(1894) Norbert WIENER (1946) Enrico BOMPIERI
27		M	(1867) Arthur Lee DIXON	
28		M	(1898) John WISHART	
29		G	(1803) Christian Andreas DOPPLER (1849) Horace LAMB (1879) Nikolay Mitrofanovich KRYLOV	
30		V	(1549) Sir Henry SAVILE	

2nd IMO – 1960

Nel trapezoide isoscele $ABCD$ (AB parallelo a DC e $BC = AD$), sia $AB = a$, $CD = c$ e sia la distanza tra A e CD pari ad h . Mostrare come costruire tutti i punti X sull'asse di simmetria tali che $\angle BXC = \angle AXD = 90^\circ$. Trovare inoltre la distanza da ognuno di questi punti X da AB e da CD . Qual è la condizione di esistenza di questi punti?

Il Meraviglioso Mondo della Statistica

I numeri sono come le persone: se li torturi abbastanza a lungo, diranno qualsiasi cosa tu voglia.

Oroscopo

Il Sole entra nella costellazione dello **Scorpione** il 24; i nati in questo periodo negano, e sostengono di essere nati dopo.

Il Sole entra nella costellazione di **Ofiuco** il 30; i nati in questo periodo sono invidiati da tutti gli altri perché quando dicono "Ofiuco" l'astrologo sta zitto.

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

John Henry WHITEHEAD

My work has always tried to unite the true with the beautiful and when I had to choose one or the other, I usually chose the beautiful.

Hermann WEYL

Whereas Nature does not admit of more than three dimensions ... it may justly seem very improper to talk of a solid ... drawn into a fourth, fifth, sixth, or further dimension.

John WALLIS

"Of the many forms of false culture, a premature converse with abstractions is perhaps the most likely to prove fatal to the growth of a masculine vigour of intellect."

George BOOLE

"A scientist can hardly meet with anything more undesirable than to have the foundations give way just as the work is finished. I was put in this position by a letter from Mr. Bertrand Russell when the work was nearly through the press."

Fredrich Ludwig Gottlob FREGE

"Logic is the hygiene the mathematician practices to keep his ideas healthy and strong."

Hermann Klaus Hugo WEYL

"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

48	1	S	(1792) Nikolay Yvanovich LOBACHEVSKY	
	2	D	(1831) Paul David Gustav DU BOIS-RAYMOND (1901) George Frederick James TEMPLE	
49	3	L	(1903) Sidney GOLDSTEIN (1924) John BACKUS	
	4	M	(1795) Thomas CARLYLE	
	5	M	(1868) Arnold Johannes Wilhelm SOMMERFELD (1901) Werner Karl HEISENBERG	
	6	G	(1682) Giulio Carlo Fagnano dei Toschi	
	7	V	(1647) Giovanni CEVA (1823) Leopold KRONECKER (1830) Antonio Luigi Gaudenzio Giuseppe CREMONA	
	8	S	(1508) Regnier GEMMA FRISIUS (1865) Jaques Salomon HADAMARD (1919) Julia Bowman ROBINSON	
	9	D	(1883) Nikolai Nikolaievich LUZIN (1906) Grace Brewster MURRAY HOPPER (1917) Sergei Vasilovich FOMIN	
	50	10	L	(1804) Karl Gustav Jacob JACOBI (1815) Augusta Ada KING Countess of LOVELACE
		11	M	(1882) Max BORN
12		M	(1832) Peter Ludwig Mejdell SYLOW	
13		G	(1724) Franz Ulrich Theodosius AEPINUS (1887) George POLYA	
14		V	(1546) Tycho BRAHE	
15		S	(1802) Janos BOLYAI	
16		D	(1804) Wiktor Yakovievich BUNYAKOWSKY	
51	17	L	(1706) Gabrielle Emile Le Tonnelier de Breteuil du CHATELET (1835) Felice CASORATI (1842) Marius Sophus LIE (1900) Dame Mary Lucy CARTWRIGHT	
	18	M	(1917) Roger LYNDON	
	19	M	(1783) Charles Julien BRIANCHON (1854) Marcel Louis BRILLOUIN	
	20	G	(1494) Oronce FINE (1648) Tommaso CEVA (1875) Francesco Paolo CANTELLI	
	21	V	(1878) Jan LUKASHEVIKZ (1932) John Robert RINGROSE	
	22	S	(1824) Francesco BRIOSCHI (1859) Otto Ludwig HOLDER (1877) Tommaso BOGGIO (1887) Srinivasa Aiyangar RAMANUJAN	
	23	D	(1872) Georgii Yurii PFEIFFER	
	52	24	L	(1822) Charles HERMITE (1868) Emmanuel LASKER
		25	M	(1642) Isaac NEWTON (1900) Antoni ZYGMUND
		26	M	(1780) Mary Fairfax Greig SOMERVILLE (1791) Charles BABBAGE
		27	G	(1571) Johannes KEPLER (1654) Jacob (Jacques) BERNOULLI
28		V	(1808) Athanase Louis Victoire DUPRE (1882) Arthur Stanley EDDINGTON (1903) John von NEUMANN	
29		S	(1856) Thomas Jan STIELTJES	
30		D	(1897) Stanislaw SAKS	
1		31	L	(1872) Volodymyr LEVIYTSKY (1896) Carl Ludwig SIEGEL (1952) Vaughan Frederick Randall JONES

3rd IMO – 1961

Risolvetevi l'equazione

$$\cos^n x - \sin^n x = 1,$$

dove n è un numero naturale.

Il Meraviglioso Mondo della Statistica

Le lotterie sono delle tasse sull'analfabetismo matematico.

Oroscopo

Il Sole entra nella costellazione del Sagittario il 18; i nati in questo periodo parlano molto dei lati positivi dell'astrologia, ma al momento non ci hanno ancora detto niente

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

Nikolay LOBACHEVSKY

On the chessboard, lies and hypocrisy do not survive long. The creative combination lays bare the presumption of a lie; the merciless fact, culminating in the checkmate, contradicts the hypocrite.

Emmanuel LASKER

"Die ganze Zahl schuf der liebe Gott, alles Übrige ist Menschenwerk."

Leopold KRONECKER

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

Jaques Salomon HADAMARD

"Now it is quite clear to me that there are no solid spheres in the heavens, and those that have been devised by authors to save the appearances, exist only in their imagination, for the purpose of permitting the mind to conceive the motion which the heavenly bodies trace in their courses."

Tycho BRAHE

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

Janos BOLYAI

"The Analytical Engine weaves algebraic patterns, just as the Jacquard loom weaves flowers and leaves"

Augusta Ada KING Countess of LOVELACE

"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

"Analysis takes back with one hand what it gives with the other. I recoil in fear and loathing from that deplorable evil: continuous functions with no derivatives."

Charles HERMITE

"Priusquam autem ad creationem, hoc est ad finem omnis disputationis, veniamus: tentanda omnia existimo"

Johannes KEPLER