

The Mamas & The Papas
of
The Math X-Files
&
Episodic Epitomizing Epithets
&
A Bit More

#77 of Gottschalk's Gestalts

A Series Illustrating Innovative Forms
of the Organization & Exposition
of Mathematics
by Walter Gottschalk

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GG77-1 (38)

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GG77-2

- the mother of abstract algebra

Amalie 'Emmy' Noether

1882 - 1935

German - American

- the father of accounting
- the father of double-entry bookkeeping
- the first mathematician
of whom there exists an authentic portrait

Luca Pacioli

1445-1514

Italian

- the father of acoustics

Marin Mersenne

1588 - 1648

French

- the father of algebra
Diophantus of Alexandria
200? - 284? CE
Greek

or
Abu Ja'far Muhammad ibn Musa al-Khwarizmi
ca 780 - ca 850 CE
Persian, born in Baghdad

or
François Viète
1540 - 1603
French

- the father of algebraic invariant theory
- the father of matrix algebra
- the father of octonions

Arthur Cayley
1821 - 1895
English

- the king of algebraic invariant theory

Paul Albert Gordan
1837 - 1912
German

- the father of algebraic topology
- the father of dynamical systems
- the father of the theory of analytic functions of several complex variables
- the greatest French mathematician in the second half of the nineteenth century

Jules Henri Poincaré

1854 - 1912

French

- the father of American mathematics

Eliakim Hastings Moore

1862 - 1932

American

- the father of analytic geometry
- the father of modern philosophy
- the father of modern rationalism
- the father of modern reason

René Descartes

1596 - 1650

French

- the father of the analytic theory of continued fractions

Thomas Jan Stieltjes

1856 - 1894

Dutch

GG77-5

- the father of artificial intelligence

Marvin Lee Minsky

born 1927

American

- the father of the arithmetization of analysis

Bernard Bolzano

1781 - 1848

Czech

- the father of axiomatic group theory
- the first mathematician to completely define
an abstract group

Heinrich Martin Weber

1842 - 1913

German

- the father of axiomatic set theory

Ernst Friedrich Ferdinand Zermelo

1871-1953

German

- the fathers of calculus

Isaac Newton

English

1642 - 1727

&

Gottfried Wilhelm Leibniz

1646 - 1716

German

- the father of calculus textbooks

- the father of fluid mechanics

Leonhard Euler

1707 - 1783

Swiss

- the father of catastrophe theory

René Thom

born 1923

French

- the fathers of category theory

Samuel Eilenberg

1913 - 1998

Polish-American

&

Saunders MacLane

born 1909

American

GG77-7

- the father of chaos theory

Jules Henri Poincaré

1854 - 1912

French

or

Edward Norton Lorenz

born 1917

American

- the mother of computer programming

- the first computer programmer

Lady Augusta Ada Byron King, Countess of Lovelace

1815 - 1852

English

- the father of computer science

Alan Mathison Turing

1912 - 1954

English

- the father of computing

- the father of computing machines

Charles Babbage

1791 - 1871

English

- the father of conic sections
- the Great Geometer

Apollonius of Perga

fl 250 - 220 BCE

Greek

- the father of control theory
- the father of cybernetics

Norbert Wiener

1894 - 1964

American

- the father of cryptography

Johannes Trithemius

1462 - 1516

German

- the father of descriptive geometry
- the father of differential geometry

Gaspard Monge

1746 - 1818

French

- the father of diophantine analysis
- the first systematic user of algebraic symbols

Diophantus of Alexandria

200? - 284? CE

Greek

- the father of dyadic algebra
- the father of vector algebra

Josiah Willard Gibbs

1839 - 1903

American

- the fathers of ergodic theory

George David Birkhoff

1884 - 1944

American

&

John von Neumann

1903 - 1957

Hungarian - American

- the father of experimental physics
- the father of modern observational astronomy

Galileo Galilei

1564-1642

Italian

- the father of exterior algebra
- the father of linear algebra

Hermann Günter Grassmann

1809 - 1877

German

- the father of formalism

David Hilbert

1862-1943

German

- the father of fractals

Benoit B Mandelbrot

born 1924

Polish - American

- the father of functional analysis

Stefan Banach

1892 - 1945

Polish

- the father of fuzzy logic

- the father of fuzzy sets

Lofti A Zadeh

American

- the father of game theory
- the father of the theory of Hilbert spaces
- the father of the stored program

John von Neumann

1903 - 1957

Hungarian - American

- the father of geography

Hecataeus of Miletus

ca 550 - 476 BCE

Greek

or

Eratosthenes

ca 276 - 194 BCE

Greek

or

Ptolemy of Alexandria

= Claudius Ptolemaeus (Latin)

ca 100 - ca 170 CE

Egyptian

- the father of geometric complex analysis
- the father of n-dimensional differential geometry

Georg Friedrich Bernhard Riemann

1826 - 1866

German

- the father of geometry
- the Elementator
(because his great work is entitled The Elements)

Euclid of Alexandria

fl ca 300 BCE

Greek

- the father of graph theory
- the mathematical Adam
(self-styled because
he named so many mathematical objects)

James Joseph Sylvester

1814 - 1897

English

- the father of group theory

Évariste Galois

1811 - 1832

French

- the father of harmonic analysis

Jean Baptiste Joseph Fourier
1768 - 1830
French

- the father of ideal theory

Ernst Eduard Kummer

1810 - 1893

German

- the father of information theory

Claude Elwood Shannon

1916 - 2001

American

- the father of intuitionism

Luitzen Egbertus Jan Brouwer

1881-1966

Dutch

- the father of knot theory

Peter Guthrie Tait

1831-1901

Scottish

- the fathers of K-theory

Friedrich Ernst Peter Hirzebruch

born 1927

German

&

Alexander Grothendieck

born 1928

French

&

Michael Francis Atiyah

born 1929

English

- the father of logarithms

John Napier

1550-1617

Scottish

- the father of logic
- the first logician to use variables

Aristotle

384 - 322 BCE

Greek

- the fathers of mathematical astronomy
- the fathers of modern astronomy

Georg von Peurbach

1423 - 1461

Austrian

&

Johannes Kepler

1571 - 1630

German

- the father of mathematical induction
(the first to state the principle clearly)
- the first mathematician to define
the natural numbers axiomatically

Julius Wilhelm Richard Dedekind

1831 - 1916

German

- the fathers of mathematical logic

George Boole

1815 - 1864

English

&

Friedrich Ludwig Gottlob Frege

1848 - 1925

German

& inp

Boole was the father of the propositional calculus

Frege was the father of the predicate calculus

GG77-19

- the father of mathematical physics
- the first mathematician to show how to calculate pi in principle to any desired degree of accuracy
- the greatest mathematician of antiquity

Archimedes of Syracuse

ca 287-212 BCE

Greek

- the father of mathematical proof
- the father of philosophy
- the father of physics

Thales of Miletus

ca 620 - ca 555 BCE

- the father of measure theory

Henri Léon Lebesgue

1875 - 1941

French

- the father of metaphysics

Parmenides of Elea

ca 515 - ca 445 BCE

Greek

- the fathers of modern analysis

Augustin Louis Cauchy

1789 - 1857

French

&

Karl Theodor Wilhelm Weierstrass

1815 - 1897

German

- the father of modern fluid mechanics

Ludwig Prandtl

1875 - 1953

German

- the father of modern map-making

Gerardus Mercator (Latin)

= Gerhard Kremer (original)

1512-1594

Flemish

- the father of modern modal logic

Clarence Irving Lewis

1883 - 1964

American

- the father of modern spline theory

Isaac Jacob Schoenberg

1903 - 1990

Romanian-American

GG77-21

- the father of paradoxes

Zeno of Elea

ca 490 - ca 420 BCE

Greek

- the father of the personal computer

Edmund Callis Berkeley

1909 - 1988

American

- the father of perspective

Leone Battista Alberti

1404 - 1472

Italian

- the father of Polish notation

Jan Lukasiewicz

1878 - 1956

Polish

- the father of the Polish school of mathematics

Waclaw Sierpinski

1882 - 1969

Polish

- the father of potential theory

George Green

1793 - 1841

English

- the father of printing

Johannes Gensfleisch Gutenberg

1400 - 1468

German

- the fathers of probability

Blaise Pascal

1623 - 1662

French

&

Pierre de Fermat

1601-1665

French

- the father of projective geometry

Gérard Desargues

1591 - 1661

French

- the fathers of quantum mechanics

Erwin Schrödinger

1887-1961

Austrian

&

Werner Karl Heisenberg

1901-1976

German

- the father of quaternions

William Rowan Hamilton

1805 - 1865

Irish

- the father of recreational mathematics
- the first outstanding European mathematician in the Middle Ages

Leonardo Fibonacci

= Leonardo of Pisa

ca 1170 - ca 1250

Italian

- the founders of recursive function theory include

Thoralf Albert Skolem

1887 - 1963

Norwegian

&

Rózsa Péter

1905 - 1977

Hungarian

&

Stephen Cole Kleene

1909 - 1994

American

- the father of statistics

Robert Aylmer Fisher

1890 - 1962

English

- the father of the supercomputer

Seymour Roger Cray

1925 - 1996

American

- the grandfather of symbolic dynamics

Jacques Salomon Hadamard

1865 - 1963

French

&

- the father of symbolic dynamics

Gustav Arnold Hedlund

American

- the fathers of tensor analysis

Gregorio Ricci-Curbastro

1853 - 1925

Italian

&

Tullio Levi-Civita

1873 - 1941

Italian

- the father of the theory of relativity

Albert Einstein

1879-1955

German-Swiss-American

- the father of the theory of sets

- the father of transfinite arithmetic

Georg Ferdinand Ludwig Philipp Cantor

1845 - 1918

German

- the fathers of thermodynamics

Nicholas Léonard Sadi Carnot

1796 - 1832

French

&

James Prescott Joule

1818 - 1889

English

&

Josiah Willard Gibbs

1839 - 1903

American

&

Ludwig Boltzmann

1844 - 1906

Austrian

- the father of topological groups

Lev Semenovich Pontryagin

1908 - 1988

Russian

- the father of topology
Leonhard Euler
1707 - 1783
Swiss, lived in Germany & Russia
or
Jules Henri Poincaré
1854 - 1912
French

- the father of trigonometry
Hipparchus of Nicaea/Rhodes
190 - 120 BCE
Greek
or
Nasir al-Din al-Tusi
1201 - 1274
Persian

note: for a nongender designation
try 'founder' ipso 'father' or 'mother'

- the first notable woman mathematician

Hypatia of Alexandria

ca 370 - 415 CE

Greek

- the leading mathematician of the fifteenth century

Johannes Müller of Königsberg

(German for 'king's mountain')

= Johannes Regiomontanus

(Latin for 'king's mountain')

1436 - 1476

German

- the first mathematician to extensively use
letter constants and variables for numbers

François Viète

1540 - 1603

France

- the greatest scientist of all time

Isaac Newton

1642 - 1727

English

- the first notable black mathematician

Benjamin Banneker

1731 - 1806

American

- the leading American mathematician
in the early part of the 20th century

George David Birkhoff

1884 - 1944

□ the three greatest mathematicians of all time
in chronological order

- Archimedes
ca 287 - 212 BCE
Greek

- Isaac Newton
1642 - 1727
English

- Carl Friedrich Gauss
1777 - 1855
German

□ the three L's in the history of mathematics

- Joseph Louis Lagrange
1736 - 1813

- Pierre Simon Laplace
1749 - 1827

- Adrien-Marie Legendre
1752 - 1833

were the principal French analysts
at the time of

the French Revolution
1789 - 1795

&

the Napoleonic Era
1796- 1815

□ the three ancient A's were all Greek

- Aristotle of Stagira

384 - 322 BCE

philosopher & scientist;

one of the most important & influential figures
in Western civilization

- Archimedes of Syracuse

ca 287 - 212 BCE

mathematician & physicist;

one of the three greatest mathematicians of all time

- Apollonius of Perga

fl 250 - 220 BCE

mathematician;

called 'The Great Geometer'

□ the three greatest geometers of antiquity were all Greek;
listed in chronological order

- Euclid of Alexandria
fl ca 300 BCE

- Archimedes of Syracuse
ca 287 - 212 BCE

- Apollonius of Perga
ca 255 - ca 170 BCE

□ the three great figures of ancient philosophy were all Greek

- Socrates
469 -399 BCE

- Plato
ca 428 - ca 348 BCE

- Aristotle
384 - 322 BCE

□ the three most prolific mathematicians of all time
in decreasing quantitative order

- Leonhard Euler
1707 - 1783
Swiss, lived in Germany & Russia

- Augustin Louis Cauchy
1789 - 1857
French

- Arthur Cayley
1821 - 1895
English

□ candidates for the accolade of
the last universal mathematician

- Carl Friedrich Gauss
1777 - 1855
German

- Jules Henri Poincaré
1854 - 1912
French

- David Hilbert
1862-1943
German

- Jacques Salomon Hadamard
1865 - 1963
French