

The Math Book From Pythagoras To The 57th Dimension 250 Milestones In The History Of Mathematics

Just the mention of mathematics is enough to strike fear into the hearts of many, yet without it, the human race couldn't be where it is today. By exploring the subject through its 50 key insights - from the simple (the number one) and the subtle (the invention of zero) to the sophisticated (proving Fermat's last theorem) - this book shows how mathematics has changed the way we look at the world around us.

Perfect for inquisitive children who love to have fun, there are a dozen press-out projects to create in this book, demonstrating some of the best bits of maths. Projects include fiery flexagons, mathematical card tricks and mind-bending Möbius strips. There are also lots of fascinating facts, colouring and doodling activities that will keep children busy for hours (all in the name of maths, of course).

This classic text, written by a distinguished mathematician and teacher, focuses on a fundamental theory of geometry. Topics include all types of Pythagorean triangles.

From atoms and fluorescent pigments to sulfa drug synthesis and buckyballs, this lush and authoritative chronology presents 250 milestones in the world of chemistry. As the "central science" that bridges biology and physics, chemistry plays an important role in countless medical and technological advances. Covering entertaining stories and unexpected applications, chemist and journalist Derek B. Lowe traces the most important—and surprising—chemical discoveries.

A Math Adventure
Music and Mathematics

What's Your Angle, Pythagoras?
The Math Book

Math and Myths
Numerology or What Pythagoras Wrought
The Man Who Knew Infinity

Martinez discusses various popular myths from the history of mathematics. Some stories are partly true, others are entirely false, but all show the power of invention in history. Martinez inspects a wealth of primary sources, in several languages, over a span of many centuries. By exploring disagreements and ambiguities in the history of the elements of mathematics, The Cult of Pythagoras dispels myths that obscure the actual origins of mathematical concepts. Chosen as a major selection by Scientific American Book Club (Library of Science(R))

Mr. Ruche, a Parisian bookseller, receives a bequest from a long lost friend in the Amazon of a vast library of math books, which propels him into a great exploration of the story of mathematics. Meanwhile Max, whose family lives with Mr. Ruche, takes in a voluble parrot who will discuss math with anyone. When Mr. Ruche learns of his friend's mysterious death in Brazilian rainforest, he decides that with the parrot's help he will use these books to teach Max and his brother and sister the mysteries of Euclid's Elements, Pythagoras's Theorem and the countless other mathematical wonders. But soon it becomes clear that Mr. Ruche has inherited the library for reasons other than enlightenment, and before he knows it the household is racing to prevent the parrot and vital, new theorems from falling into the wrong hands. An immediate bestseller when first published in France, The Parrot's Theorem charmingly combines a straightforward history of mathematics and a first-rate murder mystery.

David Acheson transports us into the world of geometry, one of the oldest branches of mathematics. He describes its history, from ancient Greece to the present day, and its emphasis on proofs. With its elegant deduction and practical applications, he demonstrates how geometry offers the quickest route to the spirit of mathematics at its best.

From Ancient Greek times, music has been seen as a mathematical art, and this relationship has fascinated generations. This new in paperback edition of diverse, comprehensive and fully-illustrated papers, authored by leading scholars, links the two fields in a lucid manner that is suitable for students of each subject as well as the general reader.

The Pythagorean Theorem for Babies

A Mathematical Story

A Primer of Analytic Number Theory
The Chemistry Book

From Pythagoras to Riemann
From Pythagoras to Schoenberg

The Mathematical Journey to Pythagoras and Euclid
The Pythagorean Theorem for Babies is intended to introduce babies to the principles of the Pythagorean Theorem, and also provides a colorful proof of the theorem. Mathematician Fred Carlson believes that it's never too early to introduce children, and even babies, to the basic concepts of advanced mathematics. He is sure that after reading this book, the second in his Mathematics for Babies series, you will agree with him! If you like this book, please also check out "Non-Euclidean Geometry for Babies"!

In this sequel to his award-winning How Mathematics Happened, physicist Peter S. Rudman explores the history of mathematics among the Babylonians and Egyptians, showing how their scribes in the era from 2000 to 1600 BCE used visualizations of how plane geometric figures could be partitioned into squares, rectangles, and right triangles to invent geometric algebra, even solving problems that we now do by quadratic algebra. Using illustrations adapted from both Babylonian cuneiform tablets and Egyptian hieroglyphic texts, Rudman traces the evolution of mathematics from the metric geometric algebra of Babylon and Egypt—which used numeric quantities on diagrams as a means to work out problems—to the nonmetric geometric algebra of Euclid (ca. 300 BCE). Thus, Rudman traces the evolution of calculations of square roots from Egypt and Babylon to India, and then to Pythagoras, Archimedes, and Ptolemy. Surprisingly, the best calculation was by a Babylonian scribe who calculated the square root of two to seven decimal-digit precision. Rudman provocatively asks, and then interestingly conjectures, why such a precise calculation was made in a mud-brick culture. From his analysis of Babylonian geometric algebra, Rudman formulates a "Babylonian Theorem", which he shows was used to derive the Pythagorean Theorem, about a millennium before its purported discovery by Pythagoras. He also concludes that what enabled the Greek mathematicians to surpass their predecessors was the insertion of alphabetic notation onto geometric figures. Such symbolic notation was natural for users of an alphabetic language, but was impossible for the Babylonians and Egyptians, whose writing systems (cuneiform and hieroglyphics, respectively) were not alphabetic. Rudman intersperses his discussions of early math conundrums and solutions with "Fun Questions" for those who enjoy recreational math and wish to test their understanding. The Babylonian Theorem is a masterful, fascinating, and entertaining book, which will interest both math enthusiasts and students of history.

In this book, Johnny Ball tells one of the most important stories in world history – the story of mathematics. By introducing us to the major characters and leading us through many historical twists and turns, Johnny slowly unravels the tale of how humanity built up a knowledge and understanding of shapes, numbers and patterns from ancient times, a story that leads directly to the technological wonderland we live in today. As Galileo said, 'Everything in the universe is written in the language of mathematics', and Wonders Beyond Numbers is your guide to this language. Mathematics is only one part of this rich and varied tale; we meet many fascinating personalities along the way, such as a mathematician who everyone has heard of but who may not have existed; a Greek philosopher who made so many mistakes that many wanted his books destroyed; a mathematical artist who built the largest masonry dome on earth, which builders had previously declared impossible; a world-renowned painter who discovered mathematics and decided he could no longer stand the sight of a brush; and a philosopher who lost his head, but only after he had died. Enriched with tales of colourful personalities and remarkable discoveries, there is also plenty of mathematics for keen readers to get stuck into. Written in Johnny Ball's characteristically light-hearted and engaging style, this book is packed with historical insight and mathematical marvels; join Johnny and uncover the wonders found beyond the numbers.

Containing 250 short, entertaining, and thought-provoking entries, this book explores such engaging topics as dark energy, parallel universes, the Doppler effect, the God particle, and Maxwell's demon. The timeline extends back billions of years to the hypothetical Big Bang and forward trillions of years to a time of quantum resurrection.
Computer Book
A Brief History of All Things Mathematical
The Wonder Book of Geometry
Pythagoras

A Life of the Genius Ramanujan
The Babylonian Theorem

Mathematics: A Very Short Introduction

As the famous Pythagorean statement reads, 'Number rules the universe', and its veracity is proven in the many mathematical discoveries that have accelerated the development of science, engineering, and even philosophy. A so called ", mathematics has guided and stimulated many aspects of human innovation down through the centuries. In this book, Marcel Danesi presents a historical overview of the ten greatest achievements in mathematics, and dynamically explores their importance and effects on our daily lives. Considered as a chain of events rather than isolated incidents, Danesi takes us from the beginnings of modern day mathematics with Pythagoras, through the concept of zero, right the way up to modern computational algorithms. Loaded with thought-provoking practical exercises and puzzles, Pythagoras' Legacy allows the reader to apply their knowledge and discover the significance of mathematics in their everyday lives. Looks at the mathematical aspects of music, covering such topics as compositional techniques, scales, tuning systems, and music criticism. I first had a quick look, then I started reading it. I couldn't stop. -Gerard 't Hooft (Nobel Prize, in Physics 1999) This is a book about the mathematical nature of our Universe. Armed with no more than basic high school mathematics, Dr. Joel L. Schiff takes you on a foray through some of the most intriguing aspects of the world around us. Along the way, you will visit the bizarre world of subatomic particles, honey bees and ants, galaxies, black holes, infinity, and more. Included are such goodies as measuring the speed of light with your microwave oven, determining the size of the Earth with a stick in the ground and the age of the Solar System from meteorites, understanding how the Theory of Relativity makes your everyday GPS system possible, and so much more. These topics are easily accessible to anyone who has ever brushed up against the Pythagorean Theorem and the symbol π , with the lightest dusting of algebra. Through this book, science-curious readers will come to appreciate the patterns, seeming contradictions, and extraordinary mathematical beauty of our Universe. This book covers 250 milestones in mathematical history, beginning millions of years ago with ancient "art odometers" and moving through time to our modern-day quest for new dimensions. Pythagoras and the Ratios
Pythagoras' Revenge
Hidden Harmonies
The Math Behind the Music
The Science Book
The Lives and Times of the Pythagorean Theorem
Mathematics for Machine Learning

How music has influenced mathematics, physics, and astronomy from ancient Greece to the twentieth century Music is filled with mathematical elements. The works of Bach are often said to possess a math-like logic, and Arnold Schoenberg, Iannis Xenakis, and Karlheinz Stockhausen wrote music explicitly based on mathematical principles. Yet Eli Maor argues that it is music that has had the greater influence on mathematics, not the other way around. Starting with Pythagoras, proceeding through Schoenberg, and bringing the story up to the present with contemporary string theory, Music by the Numbers tells a fascinating story of composers, scientists, inventors, and eccentrics who have played a role in the age-old relationship between music, mathematics, and the physical sciences. Weaving compelling stories of historical episodes with Maor's personal reflections as a mathematician and lover of classical music, this book will delight anyone who loves math and music.

The aim of this volume is to explain the differences between research-level mathematics and the maths taught at school. Most differences are philosophical and the first few chapters are about general aspects of mathematical thought. An undergraduate-level 2003 introduction whose only prerequisite is a standard calculus course.

The entrancing story of Pythagoras and the Pythagoreans, whose insights transformed the ancient world and still inspire the realms of science, mathematics, philosophy, and the arts. "Pythagoras's influence on the ideas, and therefore on the destiny, of the human race was probably greater than that of any single man before or after him," wrote Arthur Koestler. Though most people know of him only for the famous Pythagorean Theorem (a2 +b2=c2), in fact the pillars of our scientific tradition-belief that the universe is rational, that there is unity to all things, and that numbers and mathematics are a powerful guide to truth about nature and the cosmos-hark back to the core of this legendary sixth-century B.C. scholar. Born around 570 B.C. on the cultured Aegean island of Samos, Pythagoras (according to ancient tales) studied with the sage Thales nearby at Miletus, and with priests and scribes in Egypt and Babylon. Eventually he founded his own school at Croton in southern Italy, where he and his followers began to unravel the surprising deep truths concealed behind such ordinary tasks as tuning a lyre. While considering why some string lengths produced beautiful sounds and others discordant ones, they uncovered the ratios of musical harmony, and recognized that hidden behind the confusion and complexity of nature are patterns and orderly relationships. They had surprised the Creator at his drafting board and had glimpsed the mind of God! Some of them later would also find something darker in numbers and nature: irrationality, a revelation so unsettling and subversive that it may have contributed to the destruction of their brotherhood.

Wonders Beyond Numbers

The Great Equations: Breakthroughs in Science from Pythagoras to Heisenberg
From Gunpowder to Graphene, 250 Milestones in the History of Chemistry

From Pythagoras to Planck
Euclid's Elements (the Thirteen Books)

The Pythagorean Theorem
From Pythagoras to the 57th Dimension, 250 Milestones in the History of Mathematics

A biography of the Indian mathematician Srinivasa Ramanujan. The book gives a detailed account of his upbringing in India, his mathematical achievements, and his mathematical collaboration with English mathematician G. H. Hardy. The book also reviews the life of Hardy and the academic culture of Cambridge University during the early twentieth century. See how maths' infinite mysteries and beauty unfold in this captivating educational book! Discover more than 85 of the most important mathematical ideas, theorems, and proofs ever devised with this beautifully illustrated book. Get to know the great minds whose revolutionary discoveries changed our world today. You don't have to be a maths genius to follow along with this book!
This brilliant book is packed with short, easy-to-grasp explanations, step-by-step diagrams, and witty illustrations that play with our ideas about numbers. What is an imaginary number? Can two parallel lines ever meet? How can maths help us predict the future? All will be revealed and explained in this encyclopedia of mathematics. It's as easy as 1, 2, and 3! The Maths Book tells the exciting story of how mathematical thought advanced through history. This diverse and inclusive account will have something for everybody, including the maths behind world economies and espionage. This book charts the development of maths around the world, from ancient mathematical ideas and inventions, such as prehistoric tally bones through to the developments in mathematics during the medieval and Renaissance Europe. Fast forward to today and gain insight into the recent rise of game and group theory. Delve in deeper into the history of maths: - Ancient and Classical Periods 6000 BCE - 500 CE - The Middle Ages 500 - 1500 - The Renaissance 1500 - 1680 - The Enlightenment 1680 - 1800 - The 19 th Century 1800 - 1900 - Modern Mathematics 1900 - Present The Series Simply Explained With over 7 million copies sold worldwide to date, The Maths Book is part of the award-winning Big Ideas series from DK Books. It uses innovative graphics along with engaging writing to make complex subjects easier to understand.

Children can test their math skills and learn the Pythagorean Theorem alongside young Pythagoras in this STEM adventure. Pythagoras' curiosity takes him from Samos to Alexandria, where he meets a builder named Nefereheperherskeper, who introduces him to the right angle. While building, Pythagoras uses geometry to learn how to measure angles and discovers all he needs to know about right triangles. With playful puns and wordplay Ellis creates the perfect STEM/STEAM resource for introducing young readers to a fundamental mathematical equation. A fun and accessible way to get young minds asking "what's your angle?". Numerology is the belief that numbers have power over events. It is a descendant of number mysticism, the belief the contemplation of numbers can give mystical and non-rational insights into life, the universe, and everything. Twenty-five hundred years ago, Pythagoras originated number mysticism, crediting certain numbers with characteristics, though numerology is a more recent invention that allots numbers, hence, characteristics to individuals. Underwood Dudley outlines here the history of number mysticism and numerology and gives many examples, including biorhythms, Bible-numberists, pyram.

The Parrot's Theorem

Destroy This Book in the Name of Maths: Pythagoras Edition
Pythagorean Triangles

Pioneering Mathematician and Musical Theorist of Ancient Greece

How an Ancient Brotherhood Cracked the Code of the Universe and Lit the Path from Antiquity to Oute Music by the Numbers

From the Big Bang to Quantum Resurrection, 250 Milestones in the History of Physics

The celebrated mathematician and philosopher Pythagoras left no writings. But what if he had and the manuscript had never been found? Where would it be located? Two mathematicians, one American, one British, set out, unbeknownst to each other, to find the missing manuscript.

Shares behind-the-scenes stories for ten of the most significant equations in human history, covering a range of topics, from Feynman's statement about Maxwell's pivotal electromagnetic equations and the influence of Newton's law of gravitation to the reason Euler's formula has been called "God's equation" and Heisenberg's uncertainty principle. 20,000 first printing.

Fresh, wholesome juices are perfect when you're fasting: they're low calorie, rich in vitamins and minerals, and energy-boosting. These 100 recipes are specially designed for either a full or intermittent fast. Each tasty juice comes with a calorie count and nutritional information, and will fill you up so you don't feel deprived. Whether you're looking to detox or spur a sluggish metabolism, these juices will help you drink your way to health!

With 250 illustrated landmark inventions, publications, and events--encompassing everything from ancient record-keeping devices to the latest technologies--this highly topical addition to the Sterling Milestones series takes a chronological journey through the history and future of computer science. The topics include the first spam message, Isaac Asimov's laws of robotics, early programming languages and operating systems such as BASIC and UNIX, the microcomputer revolution, hacking, virtual reality, and more.

The Maths Book

The Biology Book

A 4,000-Year History

Celebrating the Wisdom and Beauty of Mathematics

Simply Explained
From Pythagoras to Fractals

The Cult of Pythagoras

Euclid was a mathematician from the Greek city of Alexandria who lived during the 4th and 3rd century B.C. and is often referred to as the "father of geometry." Within his foundational treatise "Elements," Euclid presents the results of earlier mathematicians and includes many of his own theories in a systematic, concise book that utilized a brief set of axioms and meticulous proofs to solidify his deductions. In addition to its easily referenced geometry, "Elements" also includes number theory and other mathematical considerations. For centuries, this work was a primary textbook of mathematics, containing the only framework for geometry known by mathematicians until the development of "non-Euclidian" geometry in the late 19th century. The extent to which Euclid's "Elements" is of his own original authorship or borrowed from previous scholars is unknown, however despite this fact it was his collation of these basic mathematical principles for which most of the world would come to the study of geometry. Today, Euclid's "Elements" is acknowledged as one of the most influential mathematical texts in history. This volume includes all thirteen books of Euclid's "Elements," is printed on premium acid-free paper, and follows the translation of Thomas Heath.

In ancient Greece, young Pythagoras discovers a special number pattern (the Pythagorean theorem) and uses it to solve problems involving right triangles.

The Harvard mathematician authors of The Art of the Infinite present a history of the famous relation "A squared plus B squared equals C squared" that assesses its contributors from da Vinci to the Freemasons while analyzing its numerous proofs and applications.

Award-winning author Clifford A. Pickover gathers into one fully illustrated volume the most important thinkers and ideas in the history of science. This unique omnibus edition includes 250 thoughtfully selected entries from many of the science-based books in the Sterling Milestones series, from biology and chemistry to engineering, math, and physics. Featuring a new introduction by Pickover, The Science Book showcases humanity's greatest achievements.

The Physics Book

A Mathematical Mystery

50 Maths Ideas You Really Need to Know

A Novel

Mathematics in Ten Great Ideas

The Story of Its Power and Beauty

The Music of Pythagoras

Distills key concepts from linear algebra, geometry, matrices, calculus, optimization, probability and statistics that are used in machine learning.

Julie Ellis and Phyllis Horning Peacock team up once again to explore Pythagorean ratios in this humorous sequel to WHAT'S YOUR ANGLE, PYTHAGORAS? Pythagoras and his cousins want to win a music contest, but first they must figure out how to play their instruments in tune, something that's never been done before. While trying to fix the problem, Pythagoras makes an important discovery--notes that sound pleasant together have a certain mathematical relationship. When Pythagoras applies this ratio to his cousins' pipes and lyres, the result is music to the ears.

A year-long inspirational celebration of the beauty and wisdom of mathematics combines sage quotes by such thinkers as Pythagoras, Richard Feynman and Robert Heinlein with sumptuous images relating to the world of math.

The updated new edition of the classic and comprehensive guide to the history of mathematics For more than forty years, A History of Mathematics has been the reference of choice for those looking to learn about the fascinating history of humankind's relationship with numbers, shapes, and patterns. This revised edition features up-to-date coverage of topics such as Fermat's Last Theorem and the Poincaré Conjecture, in addition to recent advances in areas such as finite group theory and computer-aided proofs. Distills thousands of years of mathematics into a single, approachable volume Covers mathematical discoveries, concepts, and thinkers, from Ancient Egypt to the present Includes up-to-date references and an extensive chronological table of mathematical and general historical developments. Whether you're interested in the age of Plato and Aristotle or Poincaré and Hilbert, whether you want to know more about the Pythagorean theorem or the golden mean, A History of Mathematics is an essential reference that will help you explore the incredible history of mathematics and the men and women who created it.

Pythagoras' Legacy

From the Origin of Life to Epigenics, 250 Milestones in the History of Biology

The Mathematical Universe

The Mathematics Devotional

From Pythagoras to Einstein

A History of Mathematics

entertaining and informative book, veteran math educator Alfred S. Posamentier makes the importance of the Pythagorean Theorem delightfully clear. Posamentier begins with a brief history of Pythagoras himself and the early use of his theorem by the ancient Egyptians, Babylonians, Indians, and Chinese, who used it intuitively long before Pythagoras's name was attached to it. Following this introduction to the topic, he shows the many ingenious ways in which the theorem has been proved visually by using highly imaginative diagrams. Some of these go back to ancient mathematicians; others are comparatively recent proofs, including one by the twentieth president of the United States, James A. Garfield. After demonstrating some curious applications of the theorem, Posamentier then explores the Pythagorean triples, pointing out the many hidden surprises of the three numbers that can represent the sides of a right triangle (e.g., 3, 4, 5 and 5, 12, 13).

The relationships --

An exploration of one of the most celebrated and well-known theorems in mathematics By any measure, the Pythagorean theorem is the most famous statement in all of mathematics. In this book, Eli Maor reveals the full story of this ubiquitous geometric theorem. Although attributed to Pythagoras, the theorem was known to the Babylonians more than a thousand years earlier. Pythagoras may have been the first to prove it, but his proof—if indeed he had one—is lost to us. The theorem itself, however, is central to almost every branch of science, pure or applied. Maor brings to life many of the characters that played a role in its history, providing a fascinating backdrop to perhaps our oldest enduring mathematical legacy.

Biography of the Greek philosopher Pythagoras and his lasting contributions on the fields of mathematics and philosophy.