God Created The Integers The Mathematical Breakthroughs That Changed History

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Great Physicists - William H. Cropper 2004
Presents profiles of thirty scientists, including Isaac Newton, Michael Faraday, Albert Einstein, Marie Curie, Richard Feynman, and Edwin Hubble.

Naming Infinity - Loren Graham 2009-03-31
In 1913, Russian imperial marines stormed an Orthodox monastery at Mt. Athos, Greece, to haul off monks engaged in a dangerously heretical practice known as Name Worshipping. Exiled to remote Russian outposts, the monks and their mystical movement went underground. Ultimately, they came across Russian intellectuals who embraced Name Worshipping—and who would achieve one of the biggest mathematical breakthroughs of the twentieth century, going beyond recent French achievements. Loren Graham and Jean-Michel Kantor take us

on an exciting mathematical mystery tour as they unravel a bizarre tale of political struggles, psychological crises, sexual complexities, and ethical dilemmas. At the core of this book is the contest between French and Russian mathematicians who sought new answers to one of the oldest puzzles in math: the nature of infinity. The French school chased rationalist solutions. The Russian mathematicians, notably Dmitri Egorov and Nikolai Luzin—who founded the famous Moscow School of Mathematics—were inspired by mystical insights attained during Name Worshipping. Their religious practice appears to have opened to them visions into the infinite—and led to the founding of descriptive set theory. The men and women of the leading French and Russian mathematical schools are central characters in this absorbing tale that could not be told until now. Naming Infinity is a poignant human interest story that raises provocative questions about science and religion, intuition and creativity. Proofs from THE BOOK - Martin Aigner 2013-06-29 According to the great mathematician Paul Erdös, God maintains perfect mathematical proofs in The Book. This book presents the authors candidates

for such "perfect proofs," those which contain brilliant ideas, clever connections, and wonderful observations, bringing new insight and surprising perspectives to problems from number theory, geometry, analysis, combinatorics, and graph theory. As a result, this book will be fun reading for anyone with an interest in mathematics.

Dr. Euler's Fabulous Formula - Paul J. Nahin 2017-04-04 In the mid-eighteenth century, Swiss-born mathematician Leonhard Euler developed a formula so innovative and complex that it continues to inspire research, discussion, and even the occasional limerick. Dr. Euler's Fabulous Formula shares the fascinating story of this groundbreaking formula—long regarded as the gold standard for mathematical beauty—and shows why it still lies at the heart of complex number theory. In some ways a sequel to Nahin's An Imaginary Tale, this book examines the many applications of complex numbers alongside intriguing stories from the history of mathematics. Dr. Euler's Fabulous Formula is accessible to any reader familiar with calculus and differential equations, and promises to inspire mathematicians for years to come.

On the Shoulders of Giants -

Stephen W. Hawking 2003 Stephen Hawking explains how such great men of science as Copernicus, Galileo, Kepler, Newton and Einstein built on the discoveries of those who came before them, and how these works changed the course of science, ushering astronomy and physics out of the Middle Ages and into the modern world.

How to Write a Winning Personal Statement for Graduate and Professional School - Richard J. Stelzer 2002 The personal statement is the single most important part of a graduate school application, and yet very few applicants know how to write one that will gain them admittance to the program of their choice. The third edition of this highly successful book can change all that by showing readers numerous ways to greatly improve their essays.

The History of Mathematics - David M. Burton 1985 "The History of Mathematics: An Introduction," Sixth Edition, is written for the one- or two-semester math history course taken by juniors or seniors, and covers the history behind the topics typically covered in an undergraduate math curriculum or in elementary schools or high schools. Elegantly written in David Burton's imitable prose, this classic text provides rich

historical context to the mathematics that undergrad math and math education majors encounter every day. Burton illuminates the people, stories, and social context behind mathematics'greatest historical advances while maintaining appropriate focus on the mathematical concepts themselves. Its wealth of information, mathematical and historical accuracy, and renowned presentation make The History of Mathematics: An Introduction, Sixth Edition a valuable resource that teachers and students will want as part of a permanent library.

The Man Who Loved Only Numbers - Paul Hoffman

2024-05-07

"A funny, marvelously readable portrait of one of the most brilliant and eccentric men in history." --The Seattle Times Paul Erdos was an amazing and prolific mathematician whose life as a world-wandering numerical nomad was legendary. He published almost 1500 scholarly papers before his death in 1996, and he probably thought more about math problems than anyone in history. Like a traveling salesman offering his thoughts as wares, Erdos would show up on the doorstep of one mathematician or another and announce, "My brain is open." After working through a

problem, he'd move on to the next place, the next solution. Hoffman's book, like Sylvia Nasar's biography of John Nash, A Beautiful Mind, reveals a genius's life that transcended the merely quirky. But Erdos's brand of madness was joyful, unlike Nash's despairing schizophrenia. Erdos never tried to dilute his obsessive passion for numbers with ordinary emotional interactions, thus avoiding hurting the people around him, as Nash did. Oliver Sacks writes of Erdos: "A mathematical genius of the first order, Paul Erdos was totally obsessed with his subject--he thought and wrote mathematics for nineteen hours a day until the day he died. He traveled constantly, living out of a plastic bag, and had no interest in food, sex, companionship, art-- all that is usually indispensable to a human life." The Man Who Loved Only Numbers is easy to love, despite his strangeness. It's hard not to have affection for someone who referred to children as "epsilons," from the Greek letter used to represent small quantities in mathematics; a man whose epitaph for himself read, "Finally I am becoming stupider no more"; and whose only really necessary tool to do his work was a quiet and open mind. Hoffman, who followed and spoke with Erdos over the last

10 years of his life, introduces us to an undeniably odd, yet pure and joyful, man who loved numbers more than he loved God--whom he referred to as SF, for Supreme Fascist. He was often misunderstood, and he certainly annoyed people sometimes, but Paul Erdos is no doubt missed. --Therese Littleton

Calculating the Cosmos - Ian Stewart 2016-10-25
A prize-winning popular science writer uses mathematical modeling to explain the cosmos. In Calculating the Cosmos, Ian Stewart presents an exhilarating guide to the cosmos, from our solar system to the entire universe. He describes the architecture of space and time, dark matter and dark energy, how galaxies form, why stars implode, how everything began, and how it's all going to end. He considers parallel universes, the fine-tuning of the cosmos for life, what forms extraterrestrial life might take, and the likelihood of life on Earth being snuffed out by an asteroid. Beginning with the Babylonian integration of mathematics into the study of astronomy and cosmology, Stewart traces the evolution of our understanding of the cosmos: How Kepler's laws of planetary motion led Newton to formulate his theory of gravity. How, two centuries later, tiny

irregularities in the motion of Mars inspired Einstein to devise his general theory of relativity. How, eighty years ago, the discovery that the universe is expanding led to the development of the Big Bang theory of its origins. How single-point origin and expansion led cosmologists to theorize new components of the universe, such as inflation, dark matter, and dark energy. But does inflation explain the structure of today's universe? Does dark matter actually exist? Could a scientific revolution that will challenge the long-held scientific orthodoxy and once again transform our understanding of the universe be on the way? In an exciting and engaging style, Calculating the Cosmos is a mathematical quest through the intricate realms of astronomy and cosmology.

An Imaginary Tale - Paul J. Nahin 2010-02-22 Today complex numbers have such widespread practical use-- from electrical engineering to aeronautics--that few people would expect the story behind their derivation to be filled with adventure and enigma. In An Imaginary Tale, Paul Nahin tells the 2000-year-old history of one of mathematics' most elusive numbers, the square root of minus one, also known as i. He recreates the baffling

mathematical problems that conjured it up, and the colorful characters who tried to solve them. In 1878, when two brothers stole a mathematical papyrus from the ancient Egyptian burial site in the Valley of Kings, they led scholars to the earliest known occurrence of the square root of a negative number. The papyrus offered a specific numerical example of how to calculate the volume of a truncated square pyramid, which implied the need for i. In the first century, the mathematician-engineer Heron of Alexandria encountered I in a separate project, but fudged the arithmetic; medieval mathematicians stumbled upon the concept while grappling with the meaning of negative numbers, but dismissed their square roots as nonsense. By the time of Descartes, a theoretical use for these elusive square roots--now called "imaginary numbers"--was suspected, but efforts to solve them led to intense, bitter debates. The notorious i finally won acceptance and was put to use in complex analysis and theoretical physics in Napoleonic times. Addressing readers with both a general and scholarly interest in mathematics, Nahin weaves into this narrative entertaining historical facts and mathematical discussions,

including the application of complex numbers and functions to important problems, such as Kepler's laws of planetary motion and ac electrical circuits. This book can be read as an engaging history, almost a biography, of one of the most evasive and pervasive "numbers" in all of mathematics. Some images inside the book are unavailable due to digital copyright restrictions.

The Dreams That Stuff Is Made Of - Stephen Hawking 2011-10-25

"God does not play dice with the universe." So said Albert Einstein in response to the first discoveries that launched quantum physics, as they suggested a random universe that seemed to violate the laws of common sense. This 20th-century scientific revolution completely shattered Newtonian laws, inciting a crisis of thought that challenged scientists to think differently about matter and subatomic particles.The Dreams That Stuff Is Made Of compiles the essential works from the scientists who sparked the paradigm shift that changed the face of physics forever, pushing our understanding of the universe on to an entirely new level of comprehension. Gathered in this anthology is the scholarship that shocked and befuddled the scientific world, including works by Niels

Bohr, Max Planck, Werner Heisenberg, Max Born, Erwin Schrodinger, J. Robert Oppenheimer, Richard Feynman, as well as an introduction by today's most celebrated scientist, Stephen Hawking.

You Matter to God - Derek Prince 2010-04-01
In his clear and accessible signature style, Derek Prince employs his extraordinary understanding of Scripture to lay out the depth of Jesus's great love for individuals and to help them discover their worth. Using powerful biblical teachings on the parables of the Hidden Treasure and the Pearl of Great Price, Prince helps free readers from guilt, insecurity, fear, and shame, in order to help them realize how incredibly loved they are.

Fermat's Last Theorem - Simon Singh 1998-05
In 1963 a schoolboy browsing in his local library stumbled across a great mathematical problem: Fermat's Last Theorem, a puzzle that every child can now understand, but which has baffled mathematicians for over 300 years. Aged just ten, Andrew Wiles dreamed he would crack it.

In Pursuit of the Unknown - Ian Stewart 2012-03-13
The seventeen equations that form the basis for life as we

know it. Most people are familiar with history's great equations: Newton's Law of Gravity, for instance, or Einstein's theory of relativity. But the way these mathematical breakthroughs have contributed to human progress is seldom appreciated. In In Pursuit of the Unknown, celebrated mathematician Ian Stewart untangles the roots of our most important mathematical statements to show that equations have long been a driving force behind nearly every aspect of our lives. Using seventeen of our most crucial equations -- including the Wave Equation that allowed engineers to measure a building's response to earthquakes, saving countless lives, and the Black-Scholes model, used by bankers to track the price of financial derivatives over time -- Stewart illustrates that many of the advances we now take for granted were made possible by mathematical discoveries. An approachable, lively, and informative guide to the mathematical building blocks of modern life, In Pursuit of the Unknown is a penetrating exploration of how we have also used equations to make sense of, and in turn influence, our world.

God Created The Integers - Stephen Hawking 2007-10-09 Looks at landmark

mathematical discoveries over the past 2,500 years by such mathematicians as Euclid, Isaac Newton, Pierre Simon de Laplace, Georg Cantor, Alan Turing, and others, offering profiles of twenty-one important mathematical masters, facsimiles of their key works, and commentary on their contributions to the history of mathematics.

Genius At Play - Siobhan Roberts 2015-07-14 Monografie over de Britse wiskundige (1937).

The Four Pillars of Geometry - John Stillwell 2005-08-09 This book is unique in that it looks at geometry from 4 different viewpoints - Euclid-style axioms, linear algebra, projective geometry, and groups and their invariants Approach makes the subject accessible to readers of all mathematical tastes, from the visual to the algebraic Abundantly supplemented with figures and exercises

Making up Numbers: A History of Invention in Mathematics - Ekkehard Kopp 2020-10-23 Making up Numbers: A History of Invention in Mathematics offers a detailed but accessible account of a wide range of mathematical ideas. Starting with elementary concepts, it leads the reader towards aspects of current mathematical research. The book explains

how conceptual hurdles in the development of numbers and number systems were overcome in the course of history, from Babylon to Classical Greece, from the Middle Ages to the Renaissance, and so to the nineteenth and twentieth centuries. The narrative moves from the Pythagorean insistence on positive multiples to the gradual acceptance of negative numbers, irrationals and complex numbers as essential tools in quantitative analysis. Within this chronological framework, chapters are organised thematically, covering a variety of topics and contexts: writing and solving equations, geometric construction, coordinates and complex numbers, perceptions of 'infinity' and its permissible uses in mathematics, number systems, and evolving views of the role of axioms. Through this approach, the author demonstrates that changes in our understanding of numbers have often relied on the breaking of long-held conventions to make way for new inventions at once providing greater clarity and widening mathematical horizons. Viewed from this historical perspective, mathematical abstraction emerges as neither mysterious nor immutable, but as a

contingent, developing human activity. Making up Numbers will be of great interest to undergraduate and A-level students of mathematics, as well as secondary school teachers of the subject. In virtue of its detailed treatment of mathematical ideas, it will be of value to anyone seeking to learn more about the development of the subject. **The Loom of God** - Clifford A. Pickover 2010-08-17 "A marvelously entertaining, historical romp through the unexpected connections between mathematics and mysticism" (Paul Hoffman, Discover). From the mysterious cult of Pythagoras to the awesome mechanics of Stonehenge to digitally generated "gargoyles" and fractals, mathematics has always been a powerful, even divine force in the world. In a lively, intelligent synthesis of math, mysticism, and science fiction, Clifford Pickover explains the eternal magic of numbers. Taking a uniquely humorous approach, he appoints readers "Chief Historian" of an intergalactic museum and sends them, along with a quirky cast of characters, hurtling through the ages to explore how individuals used numbers for such purposes as predicting the end of the world, finding love, and winning wars.

An Invitation to Mathematical Physics and Its History - Jont Allen 2020-09-22 This state of the art book takes an applications based approach to teaching mathematics to engineering and applied sciences students. The book lays emphasis on associating mathematical concepts with their physical counterparts, training students of engineering in mathematics to help them learn how things work. The book covers the concepts of number systems, algebra equations and calculus through discussions on mathematics and physics, discussing their intertwined history in a chronological order. The book includes examples, homework problems, and exercises. This book can be used to teach a first course in engineering mathematics or as a refresher on basic mathematical physics. Besides serving as core textbook, this book will also appeal to undergraduate students with cross-disciplinary interests as a supplementary text or reader.

One-hundred Problems Involving the Number 100 - G. Patrick Vennebush 2020 "Math educators always seek great problems and tasks for the classroom, and this collection contains many that could be used in various grades. By using this book, the

reader will understand ways that great problems can be used to encourage student participation and to promote powerful mathematical ideas. In addition, suggestions for how problems can be presented in the classroom will provide professional development to teachers in the form of effective routines for promoting problem solving. This book would be both a fun read for NTCM's membership"--

Number, the Language of Science - Tobias Dantzig 1954

The History of Mathematics - Roger L. Cooke 2011-02-14 This new edition brings the fascinating and intriguing history of mathematics to life The Second Edition of this internationally acclaimed text has been thoroughly revised, updated, and reorganized to give readers a fresh perspective on the evolution of mathematics. Written by one of the world's leading experts on the history of mathematics, the book details the key historical developments in the field, providing an understanding and appreciation of how mathematics influences today's science, art, music, literature, and society. In the first edition, each chapter was devoted to a single culture. This Second Edition is organized by subject matter: a general survey of

mathematics in many cultures, arithmetic, geometry, algebra, analysis, and mathematical inference. This new organization enables students to focus on one complete topic and, at the same time, compare how different cultures approached each topic. Many new photographs and diagrams have been added to this edition to enhance the presentation. The text is divided into seven parts: The World of Mathematics and the Mathematics of the World, including the origin and prehistory of mathematics, cultural surveys, and women mathematicians Numbers, including counting, calculation, ancient number theory, and numbers and number theory in modern mathematics Color Plates, illustrating the impact of mathematics on civilizations from Egypt to Japan to Mexico to modern Europe Space, including measurement, Euclidean geometry, post-Euclidean geometry, and modern geometrics Algebra, including problems leading to algebra, equations and methods, and modern algebra Analysis, including the calculus, real, and complex analysis Mathematical Inference, including probability and statistics, and logic and set theory As readers progress through the text, they learn

about the evolution of each topic, how different cultures devised their own solutions, and how these solutions enabled the cultures to develop and progress. In addition, readers will meet some of the greatest mathematicians of the ages, who helped lay the groundwork for today's science and technology. The book's lively approach makes it appropriate for anyone interested in learning how the field of mathematics came to be what it is today. It can also serve as a textbook for undergraduate or graduate-level courses. An Instructor's Manual presenting detailed solutions to all the problems in the book is available upon request from the Wiley editorial department.

The Maths Book - DK 2019-09-05

Learn about the most important mathematical ideas, theorems, and movements in The Maths Book. Part of the fascinating Big Ideas series, this book tackles tricky topics and themes in a simple and easy to follow format. Learn about Maths in this overview guide to the subject, great for novices looking to find out more and experts wishing to refresh their knowledge alike! The Maths Book brings a fresh and vibrant take on the topic through eye-catching graphics and diagrams to immerse yourself in. This captivating book will broaden

your understanding of Maths, with: - More than 85 ideas and events key to the development of mathematics - Packed with facts, charts, timelines and graphs to help explain core concepts - A visual approach to big subjects with striking illustrations and graphics throughout - Easy to follow text makes topics accessible for people at any level of understanding The Maths Book is a captivating introduction to the world's most famous theorems, mathematicians and movements, aimed at adults with an interest in the subject and students wanting to gain more of an overview. Charting the development of maths around the world from Babylon to Bletchley Park, this book explains how maths help us understand everything from patterns in nature to artificial intelligence. Your Maths Questions, Simply Explained What is an imaginary number? Can two parallel lines ever meet? How can maths help us predict the future? This engaging overview explores answers to big questions like these and how they contribute to our understanding of maths. If you thought it was difficult to learn about topics like algebra and statistics, The Maths Book presents key information in an easy to follow layout. Learn about the history of maths, from

ancient ideas such as magic squares and the abacus to modern cryptography, fractals, and the final proof of Fermat's Last Theorem. The Big Ideas Series With millions of copies sold worldwide, The Maths Book is part of the award-winning Big Ideas series from DK. The series uses striking graphics along with engaging writing, making big topics easy to understand. r to understand. **Fear of Physics** - Lawrence M. Krauss 2007-07-30 "Assume the cow is a sphere." So begins this lively, irreverent, and informative look at everything from the physics of boiling water to cutting-edge research at the observable limits of the universe. Rich with anecdotes and accessible examples, Fear of Physics nimbly ranges over the tools and thought behind the world of modern physics, taking the mystery out of what is essentially a very human intellectual endeavour.

Why Beauty Is Truth - Ian Stewart 2008-04-29 Physics.

How Mathematicians Think - William Byers 2010-05-02 To many outsiders, mathematicians appear to think like computers, grimly grinding away with a strict formal logic and moving methodically--even algorithmically--from one black-and-white deduction to another.

Yet mathematicians often describe their most important breakthroughs as creative, intuitive responses to ambiguity, contradiction, and paradox. A unique examination of this less-familiar aspect of mathematics, How Mathematicians Think reveals that mathematics is a profoundly creative activity and not just a body of formalized rules and results. Nonlogical qualities, William Byers shows, play an essential role in mathematics. Ambiguities, contradictions, and paradoxes can arise when ideas developed in different contexts come into contact. Uncertainties and conflicts do not impede but rather spur the development of mathematics. Creativity often means bringing apparently incompatible perspectives together as complementary aspects of a new, more subtle theory. The secret of mathematics is not to be found only in its logical structure. The creative dimensions of mathematical work have great implications for our notions of mathematical and scientific truth, and How Mathematicians Think provides a novel approach to many fundamental questions. Is mathematics objectively true? Is it discovered or invented? And is there such a thing as a "final" scientific theory? Ultimately, How Mathematicians Think shows

that the nature of mathematical thinking can teach us a great deal about the human condition itself.

Warped Passages - Lisa Randall 2009-10-21
The universe has many secrets. It may hide additional dimensions of space other than the familier three we recognize. There might even be another universe adjacent to ours, invisible and unattainable . . . for now. Warped Passages is a brilliantly readable and altogether exhilarating journey that tracks the arc of discovery from early twentieth-century physics to the razor's edge of modern scientific theory. One of the world's leading theoretical physicists, Lisa Randall provides astonishing scientific possibilities that, until recently, were restricted to the realm of science fiction. Unraveling the twisted threads of the most current debates on relativity, quantum mechanics, and gravity, she explores some of the most fundamental questions posed by Nature—taking us into the warped, hidden dimensions underpinning the universe we live in, demystifying the science of the myriad worlds that may exist just beyond our own.

The Golden Ratio - Gary B. Meisner 2018-10-23
This enlightening and gorgeously illustrated book explores the beauty and

mystery of the divine proportion in art, architecture, nature, and beyond. From the pyramids of Giza, to quasicrystals, to the proportions of the human face, the golden ratio has an infinite capacity to generate shapes with exquisite properties. Author Gary Meisner has spent decades researching the subject, investigating and collaborating with people across the globe in dozens of professions and walks of life. In The Golden Ratio, he shares his enlightening journey. Exploring the long history of this fascinating number, as well as new insights into its power and potential applications, The Golden Ratio invites you to take a new look at this timeless topic.

Mind Tools - Rudy Rucker 2013-11-21 Originally published: Boston: Houghton Mifflin, 1987. Mathematical Undecidability, Quantum Nonlocality and the Question of the Existence of God - A. Driessen 2012-12-06 On January 22, 1990, the late John Bell held at CERN (European Laboratory for Particle Physics), Geneva a seminar organized by the Center of Quantum Philosophy, that at this time was an association of scientists interested in the interpretation of quantum mechanics. In this seminar Bell presented once

again his famous theorem. Thereafter a discussion took place in which not only physical but also highly speculative epistemological and philosophical questions were vividly debated. The list of topics included: assumption of free will in Bell's theorem, the understanding of mind, the relationship between the mathematical and the physical world, the existence of unobservable causes and the limits of human knowledge in mathematics and physics. Encouraged by this stimulating discussion some of the participants decided to found an Institute for Interdisciplinary Studies (IIS) to promote philosoph ical and interdisciplinary reflection on the advances of science. Meanwhile the IIS has associated its activities with the Swiss foundation, Fondation du Leman, and the Dutch foundation, Stichting Instudo, registered in Geneva and Amsterdam, respectively. With its activities the IIS intends to strengthen the unity between the professional activities in science and the reflection on fun damental philosophical questions. In addition the interdisciplinary approach is expected to give a contribution to the progress of science and the socio economic development. At present three

working groups are active within the IIS, i. e. : - the Center for Quantum Philosophy, - the Wealth Creation and Sustainable Development Group, - the Neural Science Group.

The Man Who Knew Infinity - Robert Kanigel 2016-04-26 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.

The Mathematics of Life - Ian Stewart 2011-06-07 Biologists have long dismissed mathematics as being unable to meaningfully contribute to our understanding of living beings. Within the past ten years, however, mathematicians have proven that they hold the key to unlocking the mysteries of our world -- and ourselves. In The Mathematics of Life, Ian Stewart provides a fascinating overview of the vital but little-recognized role mathematics has played in pulling back the curtain on the hidden complexities of the natural world -- and how its contribution will be even more

vital in the years ahead. In his characteristically clear and entertaining fashion, Stewart explains how mathematicians and biologists have come to work together on some of the most difficult scientific problems that the human race has ever tackled, including the nature and origin of life itself. *God Created The Integers* - Stephen Hawking 2007-03-29 Bestselling author and physicist Stephen Hawking explores the "masterpieces" of mathematics, 25 landmarks spanning 2,500 years and representing the work of 15 mathematicians, including Augustin Cauchy, Bernard Riemann, and Alan Turing. This extensive anthology allows readers to peer into the mind of genius by providing them with excerpts from the original mathematical proofs and results. It also helps them understand the progression of mathematical thought, and the very foundations of our present-day technologies. Each chapter begins with a biography of the featured mathematician, clearly explaining the significance of the result, followed by the full proof of the work, reproduced from the original publication. **The Illustrated Theory of Everything** - Stephen W. Hawking 2011-05-03 Stephen W. Hawking, widely believed to have been one of be one of the world□s greatest

minds, presents a series of seven lectures□ covering everything from big bang to black holes to string theory□. These lectures not only capture the brilliance of Hawking□'s mind, but his characteristic wit as well. In The Illustrated Theory of Everything, Hawking begins with a history of ideas about the universe, from Aristotle□s determination that the Earth is round to Hubble□s discovery, more than 2,000 years later, that the universe is expanding. Using that as a launching pad, he explores the reaches of modern physics, including theories on the origin of the universe (e.g., the Big Bang), the nature of black holes, and space-time. Finally, he poses the questions left unanswered by modern physics, especially how to combine all the partial theories into a □unified theory of everything.□ □If we find the answer to that,□ he claims, □it would be the ultimate triumph of human reason.□ A great popularizer of science as well as a brilliant scientist, Hawking believes that advances in theoretical science should be □understandable in broad principle by everyone, not just a few scientists.□ In this book, he offers a fascinating voyage of discovery about the cosmos and our place in it. It is a book for anyone who has ever gazed at the night sky and

wondered what was up there and how it came to be.

My Brief History - Stephen Hawking 2013-09-10 NATIONAL BESTSELLER Stephen Hawking has dazzled readers worldwide with a string of bestsellers exploring the mysteries of the universe. Now, for the first time, perhaps the most brilliant cosmologist of our age turns his gaze inward for a revealing look at his own life and intellectual evolution. My Brief History recounts Stephen Hawking's improbable journey, from his postwar London boyhood to his years of international acclaim and celebrity. Lavishly illustrated with rarely seen photographs, this concise, witty, and candid account introduces readers to a Hawking rarely glimpsed in previous books: the inquisitive schoolboy whose classmates nicknamed him Einstein; the jokester who once placed a bet with a colleague over the existence of a particular black hole; and the young husband and father struggling to gain a foothold in the world of physics and cosmology. Writing with characteristic humility and humor, Hawking opens up about the challenges that confronted him following his diagnosis of ALS at age twenty-one. Tracing his development as a thinker, he explains how the prospect of an early death

urged him onward through numerous intellectual breakthroughs, and talks about the genesis of his masterpiece A Brief History of Time—one of the iconic books of the twentieth century. Clear-eyed, intimate, and wise, My Brief History opens a window for the rest of us into Hawking's personal cosmos.

God Is Great, God Is Good - William Lane Craig 2010-08-24 2010 Christianity Today Book Award winner The days have passed when the goodness of God--indeed, the reality of God itself--could reasonably be called a consensus opinion. God's reputation has come under considerable review in recent days, with some going so far as to say that it's not we who've made a mess of things. Instead whatever it is we call God is to blame. But is such an opinion really a fair assessment? In this magisterial collection, the contemporary complaints against belief in God are addressed with intellectual passion and rigor by some of the most astute theological and philosophical minds of the day: J. P. Moreland Paul Moser John Polkinghorne Michael Behe Michael J. Murray Alister McGrath Paul Copan Jerry Walls Charles Taliaferro Scot McKnight Gary Habermas Mark Mittelberg Chad Meister William Lane Craig Including an

interview by Gary Habermas with noted convert to theism Antony Flew, and a direct critical response to Richard Dawkins's God Delusion by Alvin Plantinga, God Is Great, God Is Good offers convincing and compelling reassurance that though the world has changed, God has not.

Is God a Mathematician? - Mario Livio 2011-02-22 Bestselling author and astrophysicist Mario Livio examines the lives and theories of history's greatest mathematicians to ask how—if mathematics is an abstract construction of the human mind—it can so perfectly explain the physical world. Nobel Laureate Eugene Wigner once wondered about "the unreasonable effectiveness of mathematics" in the formulation of the laws of nature. Is God a Mathematician? investigates why mathematics is as powerful as it is. From ancient times to the present, scientists and philosophers have marveled at how such a seemingly abstract discipline could so perfectly explain the natural world. More than that—mathematics has often made predictions, for example, about subatomic particles or cosmic phenomena that were unknown at the time, but later were proven to be true. Is mathematics ultimately invented or discovered? If, as

Einstein insisted, mathematics is "a product of human thought that is independent of experience," how can it so accurately describe and even predict the world around us? Physicist and author Mario Livio brilliantly explores mathematical ideas from Pythagoras to the present day as he shows us how intriguing questions and ingenious answers have led to ever deeper insights into our world. This fascinating book will interest anyone curious about the human mind, the scientific world, and the relationship between them.

Why? - Mario Livio 2017-07-11 Astrophysicist and author Mario Livio investigates perhaps the most human of all our characteristics—curiosity—in this "lively, expert, and definitely not dumbed-down account" (Kirkus Reviews) as he explores our innate desire to know why. Experiments demonstrate that people are more distracted when they overhear a phone conversation—where they can know only one side of the dialogue—than when they overhear two people talking and know both sides. Why does half a conversation make us more curious than a whole conversation? "Have you ever wondered why we wonder why? Mario Livio has, and he takes you on a fascinating quest to understand the origin and

mechanisms of our curiosity. I thoroughly recommend it." (Adam Riess, Nobel Prize Winner in Physics, 2011). Curiosity is not only at the heart of mystery and suspense novels, it is also essential to other creative endeavors, from painting to sculpture to music. It is the principal driver of basic scientific research. Even so, there is still no definitive scientific consensus about why we humans are so curious, or about the mechanisms in our brain that are responsible for curiosity. In the ever-fascinating Why? Livio interviewed scientists in several fields to explore the nature of curiosity. He examined the lives of two of history's most curious geniuses, Leonardo da Vinci and Richard Feynman. He also talked to people with boundless curiosity: a superstar rock guitarist who is also an astrophysicist; an astronaut with degrees in computer science, biology, literature, and medicine. What drives these people to be curious about so many subjects? An astrophysicist who has written about mathematics, biology, and now psychology and neuroscience, Livio has firsthand knowledge of his subject which he explores in a lucid, entertaining way that will captivate anyone who is curious about curiosity.

Infinite Powers - Steven

Strogatz 2019

From preeminent math personality and author of The Joy of x, a brilliant and endlessly appealing explanation of calculus - how it works and why it makes our lives immeasurably better. Without calculus, we wouldn't have cell phones, TV, GPS, or ultrasound. We wouldn't have unraveled DNA or discovered Neptune or figured out how to put 5,000 songs in your pocket. Though many of us were scared away from this essential, engrossing subject in high school and college, Steven Strogatz's brilliantly creative, down☐to☐earth history shows that calculus is not about complexity; it's about simplicity. It harnesses an unreal number--infinity--to tackle real☐world problems, breaking them down into easier ones and then reassembling the answers into solutions that feel miraculous. Infinite Powers recounts how calculus tantalized and thrilled its inventors, starting with its first glimmers in ancient Greece and bringing us right up to the discovery of gravitational waves (a phenomenon predicted by calculus). Strogatz reveals how this form of math rose to the challenges of each age: how to determine the area of a circle with only sand and a stick; how to explain why Mars goes "backwards" sometimes; how to

make electricity with magnets; how to ensure your rocket doesn't miss the moon; how to turn the tide in the fight against AIDS. As Strogatz proves, calculus is truly the language of the universe. By unveiling the principles of that language, Infinite Powers makes us marvel at the world anew.