

Mathematics From The Birth Of Numbers Jan Gullberg

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Vision in Elementary Mathematics - W. W. Sawyer 2012-09-26

Sure-fire techniques of visualizing, dramatizing, and analyzing numbers promise to attract and retain students' attention and understanding. Topics include basic multiplication and division, algebra, word problems, graphs, negative numbers, fractions, many other practical applications of elementary mathematics. 1964 ed. Answers to Problems.

Strength in Numbers - Sherman K. Stein 1999-01-01

An engaging survey of the fundamental concepts of mathematics and the many ways math is used in everyday life. This is a stimulating and simple reintroduction to all the math we all learned in high school but have forgotten, using many examples of how math applies to the real world. Highlights the math topics that are most relevant to everyday concerns, such as how statistics can be misleading and how interest on savings accounts accrues at different interest rates. Also explores the most fundamental mysteries and amazing properties, such as why two negative numbers multiplied together make a positive number and why fractions can be easily multiplied but not easily added. Uses a multitude of examples from real life such as how extremely large numbers are used to write unbreakable computer codes and how the slope of a curve is used by biologists to calculate the rate of growth of species. It walks the reader step by step through simple solutions to each problem explored.

Excursions in Number Theory - Charles Stanley Ogilvy 1988-01-01

Challenging, accessible mathematical adventures involving prime numbers, number patterns, irrationals and iterations, calculating prodigies, and more. No special training is needed, just high school mathematics and an inquisitive mind. "A splendidly written, well selected and presented collection. I recommend the book unreservedly to all readers." — Martin Gardner.

The History of Mathematics - David M. Burton 1991

This text is designed for the junior/senior mathematics major who intends to teach mathematics in high school or college. It concentrates on the history of those topics typically covered in an undergraduate curriculum or in elementary schools or high schools. At least one year of calculus is a prerequisite for this course. This book contains enough material for a 2 semester course but it is flexible enough to be used in the more common 1 semester course.

Gödel, Escher, Bach - Douglas R. Hofstadter 2000

'What is a self and how can a self come out of inanimate matter?' This is the riddle that drove Douglas Hofstadter to write this extraordinary book. In order to impart his original and personal view on the core mystery of human existence - our intangible sensation of 'I'-ness - Hofstadter defines the playful yet seemingly paradoxical notion of 'strange loop', and explicates this idea using analogies from many disciplines.

A Curious History of Mathematics - Joel Levy 2016-03

Mathematics opens new doors to the amazing world of maths. Telling the exciting story from a historical perspective, it shows how mathematical science advanced through the discoveries of the ancient Babylonians, Egyptians and Greeks, the great scholars of medieval Islam and Europe, and the Renaissance and the birth of the Scientific Revolution. From the simplest concepts of numbers and arithmetic, geometry and algebra, trigonometry and calculus, right through to infinity and chaos theory, Mathematics introduces and explains the most important concepts in accessible, non-technical language.

Numbers and Infinity - E. H. Sondheim 2006-01-01

This fresh overview of numbers and infinity avoids tedium and controversy while maintaining historical accuracy and modern relevance. Perfect for undergraduate mathematics or science history courses. 1981 edition.

Mathematics for Human Flourishing - Francis Su 2020-01-07

"The ancient Greeks argued that the best life was filled with beauty, truth, justice, play and love. The mathematician Francis Su knows just where to find them."--Kevin Hartnett, Quanta Magazine" This is perhaps the most important mathematics book of our time. Francis Su shows mathematics is an experience of the mind and, most important, of the heart."--James Tanton, Global Math Project For mathematician Francis Su, a society without mathematical affection is like a city without concerts, parks, or museums. To miss out on mathematics is to live without experiencing some of humanity's most beautiful ideas. In this profound book, written for a wide audience but especially for those disenchanted by their past experiences, an award-winning mathematician and educator weaves parables, puzzles, and personal reflections to show how mathematics meets basic human desires--such as for play, beauty, freedom, justice, and love--and cultivates virtues essential for human flourishing. These desires and virtues, and the stories told here, reveal how mathematics is intimately tied to being human. Some lessons emerge from those who have struggled, including philosopher Simone Weil, whose own mathematical contributions were overshadowed by her brother's, and Christopher Jackson, who discovered mathematics as an inmate in a federal prison. Christopher's letters to the author appear throughout the book and show how this intellectual pursuit can--and must--be open to all.

The Man who Loved Only Numbers - Paul Hoffman 1999

The biography of a mathematical genius. Paul Erdos was the most prolific pure mathematician in history and, arguably, the strangest too. '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 he died. He travelled 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. Paul Hoffman, in this marvellous biography, gives us a vivid and strangely moving portrait of this singular creature, one that brings out not only Erdos's genius and his oddness, but his warmth and sense of fun, the joyfulness of his strange life.' Oliver Sacks For six decades Erdos had no job, no hobbies, no wife, no home; he never learnt to cook, do laundry, drive a car and died a virgin. Instead he travelled the world with his mother in tow, arriving at the doorstep of esteemed mathematicians declaring 'My brain is open'. He travelled until his death at 83, racing across four continents to prove as many theorems as possible, fuelled by a diet of espresso and amphetamines. With more than 1,500 papers written or co-written,

The Math Book - Clifford A. Pickover 2009

This book covers 250 milestones in mathematical history, beginning millions of years ago with ancient "ant odometers" and moving through time to our modern-day quest for new dimensions.

99 Variations on a Proof - Philip Ording 2019-02-05

An exploration of mathematical style through 99 different proofs of the same theorem This book offers a multifaceted perspective on mathematics by demonstrating 99 different proofs of the same theorem. Each chapter solves an otherwise unremarkable equation in distinct historical, formal, and imaginative styles that range from Medieval, Topological, and Doggerel to Chromatic, Electrostatic, and Psychedelic. With a rare blend of humor and scholarly aplomb, Philip Ording weaves these variations into an accessible and

wide-ranging narrative on the nature and practice of mathematics. Inspired by the experiments of the Paris-based writing group known as the Oulipo—whose members included Raymond Queneau, Italo Calvino, and Marcel Duchamp—Ording explores new ways to examine the aesthetic possibilities of mathematical activity. 99 Variations on a Proof is a mathematical take on Queneau's Exercises in Style, a collection of 99 retellings of the same story, and it draws unexpected connections to everything from mysticism and technology to architecture and sign language. Through diagrams, found material, and other imagery, Ording illustrates the flexibility and creative potential of mathematics despite its reputation for precision and rigor. Readers will gain not only a bird's-eye view of the discipline and its major branches but also new insights into its historical, philosophical, and cultural nuances. Readers, no matter their level of expertise, will discover in these proofs and accompanying commentary surprising new aspects of the mathematical landscape.

The Math of Life and Death - Kit Yates 2021-04-27

"Few of us really appreciate the full power of math--the extent to which its influence is not only in every office and every home, but also in every courtroom and hospital ward. In this ... book, Kit Yates explores the true stories of life-changing events in which the application--or misapplication--of mathematics has played a critical role: patients crippled by faulty genes and entrepreneurs bankrupted by faulty algorithms; innocent victims of miscarriages of justice; and the unwitting victims of software glitches"--Publisher marketing.

17 Lectures on Fermat Numbers - Michal Krizek 2013-03-14

The pioneering work of Pierre de Fermat has attracted the attention of mathematicians for over 350 years. This book provides an overview of the many properties of Fermat numbers and demonstrates their applications in areas such as number theory, probability theory, geometry, and signal processing. It is an ideal introduction to the basic mathematical ideas and algebraic methods connected with the Fermat numbers.

Mathematics From the Birth of Numbers - Jan Gullberg 1997-01-07

Traces the history of mathematics and numeration, and reviews symbolic logic, set theory, series, equations, functions, geometry, trigonometry, vector analysis, fractals, matrices, calculus, probability theory, and differential equations

Wonders of Numbers - Clifford A. Pickover 2003-01-16

Who were the five strangest mathematicians in history? What are the ten most interesting numbers? Jam-packed with thought-provoking mathematical mysteries, puzzles, and games, Wonders of Numbers will enchant even the most left-brained of readers. Hosted by the quirky Dr. Googol--who resides on a remote island and occasionally collaborates with Clifford Pickover--Wonders of Numbers focuses on creativity and the delight of discovery. Here is a potpourri of common and unusual number theory problems of varying difficulty--each presented in brief chapters that convey to readers the essence of the problem rather than its extraneous history. Peppered throughout with illustrations that clarify the problems, Wonders of Numbers also includes fascinating "math gossip." How would we use numbers to communicate with aliens? Check out Chapter 30. Did you know that there is a Numerical Obsessive-Compulsive Disorder? You'll find it in Chapter 45. From the beautiful formula of India's most famous mathematician to the Leviathan number so big it makes a trillion look small, Dr. Googol's witty and straightforward approach to numbers will entice students, educators, and scientists alike to pick up a pencil and work a problem.

Linear Algebra as an Introduction to Abstract Mathematics - Isaiah Lankham 2015-11-30

This is an introductory textbook designed for undergraduate mathematics majors with an emphasis on abstraction and in particular, the concept of proofs in the setting of linear algebra. Typically such a student would have taken calculus, though the only prerequisite is suitable mathematical grounding. The purpose of this book is to bridge the gap between the more conceptual and computational oriented undergraduate classes to the more abstract oriented classes. The book begins with systems of linear equations and complex numbers, then relates these to the abstract notion of linear maps on finite-dimensional vector spaces, and covers diagonalization, eigenspaces, determinants, and the Spectral Theorem. Each chapter concludes with both proof-writing and computational exercises.

The Penguin Book of Curious and Interesting Mathematics - David G. Wells 1997

David Wells's intriguing anthology spans the centuries as he introduces a collection of choice eccentrics:

people who looked for logical loopholes in the American Constitution, calmed their nerves with algebra or used sextants to measure the buttocks of Hottentot women. Along with Newton's views on chance and chaos, scenes from the life of Pythagoras and legal attempts to lay down the value of (pi), he presents maths in the Bible as well as maths and misogyny, madness and the military.

Enjoyment of Mathematics - Hans Rademacher 2015-12-08

What is so special about the number 30? How many colors are needed to color a map? Do the prime numbers go on forever? Are there more whole numbers than even numbers? These and other mathematical puzzles are explored in this delightful book by two eminent mathematicians. Requiring no more background than plane geometry and elementary algebra, this book leads the reader into some of the most fundamental ideas of mathematics, the ideas that make the subject exciting and interesting. Explaining clearly how each problem has arisen and, in some cases, resolved, Hans Rademacher and Otto Toeplitz's deep curiosity for the subject and their outstanding pedagogical talents shine through. Originally published in 1957. The Princeton Legacy Library uses the latest print-on-demand technology to again make available previously out-of-print books from the distinguished backlist of Princeton University Press. These editions preserve the original texts of these important books while presenting them in durable paperback and hardcover editions. The goal of the Princeton Legacy Library is to vastly increase access to the rich scholarly heritage found in the thousands of books published by Princeton University Press since its founding in 1905.

Mathematics and Its History - John Stillwell 2020-11-07

This textbook provides a unified and concise exploration of undergraduate mathematics by approaching the subject through its history. Readers will discover the rich tapestry of ideas behind familiar topics from the undergraduate curriculum, such as calculus, algebra, topology, and more. Featuring historical episodes ranging from the Ancient Greeks to Fermat and Descartes, this volume offers a glimpse into the broader context in which these ideas developed, revealing unexpected connections that make this ideal for a senior capstone course. The presentation of previous versions has been refined by omitting the less mainstream topics and inserting new connecting material, allowing instructors to cover the book in a one-semester course. This condensed edition prioritizes succinctness and cohesiveness, and there is a greater emphasis on visual clarity, featuring full color images and high quality 3D models. As in previous editions, a wide array of mathematical topics are covered, from geometry to computation; however, biographical sketches have been omitted. Mathematics and Its History: A Concise Edition is an essential resource for courses or reading programs on the history of mathematics. Knowledge of basic calculus, algebra, geometry, topology, and set theory is assumed. From reviews of previous editions: "Mathematics and Its History is a joy to read. The writing is clear, concise and inviting. The style is very different from a traditional text. I found myself picking it up to read at the expense of my usual late evening thriller or detective novel.... The author has done a wonderful job of tying together the dominant themes of undergraduate mathematics." Richard J. Wilders, MAA, on the Third Edition "The book...is presented in a lively style without unnecessary detail. It is very stimulating and will be appreciated not only by students. Much attention is paid to problems and to the development of mathematics before the end of the nineteenth century.... This book brings to the non-specialist interested in mathematics many interesting results. It can be recommended for seminars and will be enjoyed by the broad mathematical community." European Mathematical Society, on the Second Edition

Mathematics for the General Reader - E.C. Titchmarsh 2017-04-19

"A first-class mathematician's lucid, unhurried account of the science of numbers from arithmetic through the calculus." — James R. Newman, *The World of Mathematics*. This highly accessible introduction to mathematics is geared toward readers seeking a firm grasp of the essentials of mathematical theory and practice. The treatment also offers a concise outline of mathematical history and a clearer notion of why mathematicians do what they do. Author E. C. Titchmarsh, who served for many years as Savilian Professor of Geometry at Oxford University, begins with counting and the fundamentals of arithmetic. He guides readers through the complexities of algebra, fractions, geometry, irrational numbers, logarithms, infinite series, complex numbers, quadratic equations, trigonometry, functions, and integral and differential calculus. Titchmarsh's graceful, fluid style helps make complicated topics easier to grasp, and his inclusion of numerous examples will prove especially helpful to readers with little or no background in mathematics.

The Mathematics of the Heavens and the Earth - Glen Van Brummelen 2021-08-10

The Mathematics of the Heavens and the Earth is the first major history in English of the origins and early development of trigonometry. Glen Van Brummelen identifies the earliest known trigonometric precursors in ancient Egypt, Babylon, and Greece, and he examines the revolutionary discoveries of Hipparchus, the Greek astronomer believed to have been the first to make systematic use of trigonometry in the second century BC while studying the motions of the stars. The book traces trigonometry's development into a full-fledged mathematical discipline in India and Islam; explores its applications to such areas as geography and seafaring navigation in the European Middle Ages and Renaissance; and shows how trigonometry retained its ancient roots at the same time that it became an important part of the foundation of modern mathematics. The Mathematics of the Heavens and the Earth looks at the controversies as well, including disputes over whether Hipparchus was indeed the father of trigonometry, whether Indian trigonometry is original or derived from the Greeks, and the extent to which Western science is indebted to Islamic trigonometry and astronomy. The book also features extended excerpts of translations of original texts, and detailed yet accessible explanations of the mathematics in them. No other book on trigonometry offers the historical breadth, analytical depth, and coverage of non-Western mathematics that readers will find in The Mathematics of the Heavens and the Earth.

A Book of Abstract Algebra - Charles C Pinter 2010-01-14

Accessible but rigorous, this outstanding text encompasses all of the topics covered by a typical course in elementary abstract algebra. Its easy-to-read treatment offers an intuitive approach, featuring informal discussions followed by thematically arranged exercises. This second edition features additional exercises to improve student familiarity with applications. 1990 edition.

The World of Mathematics - James R. Newman 2000

Weapons of Math Destruction - Cathy O'Neil 2017-09-05

NEW YORK TIMES BESTSELLER • A former Wall Street quant sounds the alarm on Big Data and the mathematical models that threaten to rip apart our social fabric—with a new afterword “A manual for the twenty-first-century citizen . . . relevant and urgent.”—Financial Times NATIONAL BOOK AWARD LONGLIST • NAMED ONE OF THE BEST BOOKS OF THE YEAR BY The New York Times Book Review • The Boston Globe • Wired • Fortune • Kirkus Reviews • The Guardian • Nature • On Point We live in the age of the algorithm. Increasingly, the decisions that affect our lives—where we go to school, whether we can get a job or a loan, how much we pay for health insurance—are being made not by humans, but by machines. In theory, this should lead to greater fairness: Everyone is judged according to the same rules. But as mathematician and data scientist Cathy O'Neil reveals, the mathematical models being used today are unregulated and uncontested, even when they're wrong. Most troubling, they reinforce discrimination—propping up the lucky, punishing the downtrodden, and undermining our democracy in the process. Welcome to the dark side of Big Data.

A Mathematical Introduction to Logic - Herbert Enderton 2001-01-23

A Mathematical Introduction to Logic, Second Edition, offers increased flexibility with topic coverage, allowing for choice in how to utilize the textbook in a course. The author has made this edition more accessible to better meet the needs of today's undergraduate mathematics and philosophy students. It is intended for the reader who has not studied logic previously, but who has some experience in mathematical reasoning. Material is presented on computer science issues such as computational complexity and database queries, with additional coverage of introductory material such as sets. * Increased flexibility of the text, allowing instructors more choice in how they use the textbook in courses. * Reduced mathematical rigour to fit the needs of undergraduate students

A Mathematical History of the Golden Number - Roger Herz-Fischler 2013-12-31

This comprehensive study traces the historic development of division in extreme and mean ratio ("the golden number") from its first appearance in Euclid's Elements through the 18th century. Features numerous illustrations.

Understanding Numbers in Elementary School Mathematics - Hung-Hsi Wu 2011

This is a textbook for pre-service elementary school teachers and for current teachers who are taking professional development courses. By emphasizing the precision of mathematics, the exposition achieves a

logical and coherent account of school mathematics at the appropriate level for the readership. Wu provides a comprehensive treatment of all the standard topics about numbers in the school mathematics curriculum: whole numbers, fractions, and rational numbers. Assuming no previous knowledge of mathematics, the presentation develops the basic facts about numbers from the beginning and thoroughly covers the subject matter for grades K through 7. Every single assertion is established in the context of elementary school mathematics in a manner that is completely consistent with the basic requirements of mathematics. While it is a textbook for pre-service elementary teachers, it is also a reference book that school teachers can refer to for explanations of well-known but hitherto unexplained facts. For example, the sometimes-puzzling concepts of percent, ratio, and rate are each given a treatment that is down to earth and devoid of mysticism. The fact that a negative times a negative is a positive is explained in a leisurely and comprehensible fashion.

The Mathematics Bible - Colin Beveridge 2016-09-01

Mathematics has a history filled with brilliant minds and world-changing discoveries. It just needs to be made accessible. And that's exactly what "The Mathematics Bible" does. It describes the history and development of mathematics in easily understood language. It introduces the most important players, societies and cultures, like the Ancient Egyptians and Pythagoreans, and key figures such as Galileo, Dodgson, Babbage and Lovelace. It brings the ancient science and art of mathematics into the contemporary world of the 21st century. Accessible, well-informed and fully illustrated, this is a book that shows perfectly just how varied and fascinating mathematics can be. These definitive guides to their subjects together have sold over three million copies worldwide. Their success is undoubtedly owed to the comprehensiveness and quality of content, for an excellent price, and the smaller size is nonetheless filled with 400 illustrations.

Learning and Teaching Mathematics 0-8 - Helen Taylor 2013-11-14

'What a super book! It is absolutely packed with practical ideas and activities to help you love maths, and love teaching and/or learning it. It certainly helps to develop an enthusiasm for a subject most adults tend to say "I'm no good at..." - Early Years Educator 'A wonderful book, packed with practical ideas and activities to help all students love maths.' - Jo Boaler, Professor of Mathematics Education, Stanford University Fostering an enthusiasm for mathematics in young children is a vital part of supporting their mathematical development. Underpinned by subject and pedagogical knowledge, case studies and research-based perspectives, the authors provide clear guidance on how to support young children's learning and understanding in an effective and engaging way. Contemporary approaches to developing essential mathematical learning for young children are explored, including: play, practical activities and talk for mathematics outdoor learning understanding pattern counting, calculation and place value measures and shape problem solving and representing mathematics assessment working with parents. Written for both trainees and practitioners working with children aged 0 to 8 years, including those studying for Early Years and Early Childhood degrees and those on Primary PGCE and Primary Education courses, this book offers mathematical subject knowledge and teaching ideas in one volume. Helen Taylor is Course Leader of PGCE Primary Part-time Mathematics at Canterbury Christ Church University. Andrew Harris is Course Leader of PGCE Modular Mathematics at Canterbury Christ Church University.

Proofs from THE BOOK - Martin Aigner 2013-06-29

According to the great mathematician Paul Erdős, 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.

Math with Bad Drawings - Ben Orlin 2018-09-18

A hilarious reeducation in mathematics-full of joy, jokes, and stick figures-that sheds light on the countless practical and wonderful ways that math structures and shapes our world. In Math With Bad Drawings, Ben Orlin reveals to us what math actually is; its myriad uses, its strange symbols, and the wild leaps of logic and faith that define the usually impenetrable work of the mathematician. Truth and knowledge come in multiple forms: colorful drawings, encouraging jokes, and the stories and insights of an empathetic teacher

who believes that math should belong to everyone. Orlin shows us how to think like a mathematician by teaching us a brand-new game of tic-tac-toe, how to understand an economic crisis by rolling a pair of dice, and the mathematical headache that ensues when attempting to build a spherical Death Star. Every discussion in the book is illustrated with Orlin's trademark "bad drawings," which convey his message and insights with perfect pitch and clarity. With 24 chapters covering topics from the electoral college to human genetics to the reasons not to trust statistics, *Math with Bad Drawings* is a life-changing book for the math-stranded and math-enamored alike.

The New York Times Book of Mathematics - Gina Bari Kolata 2013

Presents a selection from the archives of the New York newspaper of its writings on mathematics from 1892 to 2010, covering such topics as chaos theory, statistics, cryptography, and computers.

Algebraic Topology - Allen Hatcher 2002

An introductory textbook suitable for use in a course or for self-study, featuring broad coverage of the subject and a readable exposition, with many examples and exercises.

Mathematics for Everyman - Egmont Colerus 2013-02-04

This witty and engaging stylebook presents the fundamentals of mathematical operations: number systems, first steps in algebra and algebraic notation, common fractions and equations, and much more. 1958 edition.

The Joy of X - Steven Henry Strogatz 2012

A comprehensive tour of leading mathematical ideas by an award-winning professor and columnist for the New York Times Opinionator series demonstrates how math intersects with philosophy, science and other aspects of everyday life. By the author of *The Calculus of Friendship*. 50,000 first printing.

The Art of More - Michael Brooks 2022-01-18

An illuminating, millennia-spanning history of the impact mathematics has had on the world, and the fascinating people who have mastered its inherent power. Counting is not innate to our nature, and without education humans can rarely count past three — beyond that, it's just "more." But once harnessed by our ancestors, the power of numbers allowed humanity to flourish in ways that continue to lead to discoveries and enrich our lives today. Ancient tax collectors used basic numeracy to fuel the growth of early civilization, navigators used clever geometrical tricks to engage in trade and connect people across vast distances, astronomers used logarithms to unlock the secrets of the heavens, and their descendants put them to use to land us on the moon. In every case, mathematics has proved to be a greatly underappreciated engine of human progress. In this captivating, sweeping history, Michael Brooks acts as our guide through the ages. He makes the case that mathematics was one of the foundational innovations that catapulted humanity from a nomadic existence to civilization, and that it has since then been instrumental in every great leap of humankind. Here are ancient Egyptian priests, Babylonian bureaucrats, medieval architects, dueling Swiss brothers, renaissance painters, and an eccentric professor who invented the infrastructure of the online world. Their stories clearly demonstrate that the invention of mathematics was every bit as important to the human species as was the discovery of fire. From first page to last, *The Art of More* brings mathematics back into the heart of what it means to be human.

A Source Book in Mathematics, 1200-1800 - Dirk Jan Struik 2014-07-14

These selected mathematical writings cover the years when the foundations were laid for the theory of numbers, analytic geometry, and the calculus. Originally published in 1986. The Princeton Legacy Library uses the latest print-on-demand technology to again make available previously out-of-print books from the distinguished backlist of Princeton University Press. These editions preserve the original texts of these important books while presenting them in durable paperback and hardcover editions. The goal of the Princeton Legacy Library is to vastly increase access to the rich scholarly heritage found in the thousands of books published by Princeton University Press since its founding in 1905.

Living Proof - Allison K. Henrich 2019

Wow! This is a powerful book that addresses a long-standing elephant in the mathematics room. Many people learning math ask "Why is math so hard for me while everyone else understands it?" and "Am I good enough to succeed in math?" In answering these questions the book shares personal stories from many now-accomplished mathematicians affirming that "You are not alone; math is hard for everyone" and "Yes; you are good enough." Along the way the book addresses other issues such as biases and prejudices that mathematicians encounter, and it provides inspiration and emotional support for mathematicians ranging from the experienced professor to the struggling mathematics student. --Michael Dorff, MAA President This book is a remarkable collection of personal reflections on what it means to be, and to become, a mathematician. Each story reveals a unique and refreshing understanding of the barriers erected by our cultural focus on "math is hard." Indeed, mathematics is hard, and so are many other things--as Stephen Kennedy points out in his cogent introduction. This collection of essays offers inspiration to students of mathematics and to mathematicians at every career stage. --Jill Pipher, AMS President This book is published in cooperation with the Mathematical Association of America.

An Adventurer's Guide to Number Theory - Richard Friedberg 2012-07-06

This witty introduction to number theory deals with the properties of numbers and numbers as abstract concepts. Topics include primes, divisibility, quadratic forms, and related theorems.

Theorems and Counterexamples in Mathematics - Bernard R. Gelbaum 2012-12-06

The gratifying response to *Counterexamples in Analysis (CEA)* was followed, when the book went out of print, by expressions of dismay from those who were unable to acquire it. The connection of the present volume with CEA is clear, although the sights here are set higher. In the quarter-century since the appearance of CEA, mathematical education has taken some large steps reflected in both the undergraduate and graduate curricula. What was once taken as very new, remote, or arcane is now a well-established part of mathematical study and discourse. Consequently the approach here is designed to match the observed progress. The contents are intended to provide graduate and advanced undergraduate students as well as the general mathematical public with a modern treatment of some theorems and examples that constitute a rounding out and elaboration of the standard parts of algebra, analysis, geometry, logic, probability, set theory, and topology. The items included are presented in the spirit of a conversation among mathematicians who know the language but are interested in some of the ramifications of the subjects with which they routinely deal. Although such an approach might be construed as demanding, there is an extensive GLOSSARY and INDEX where all but the most familiar notions are clearly defined and explained. The object of the body of the text is more to enhance what the reader already knows than to review definitions and notations that have become part of every mathematician's working context.