

The Art Of Mathematics Coffee Time In Memphis

“Witty, compelling, and just plain fun to read . . .” –Evelyn Lamb, Scientific American
The Freakonomics of math—a math-world superstar unveils the hidden beauty and logic of the world and puts its power in our hands
The math we learn in school can seem like a dull set of rules, laid down by the ancients and not to be questioned. In How Not to Be Wrong, Jordan Ellenberg shows us how terribly limiting this view is: Math isn’t confined to abstract incidents that never occur in real life, but rather touches everything we do—the whole world is shot through with it. Math allows us to see the hidden structures underneath the messy and chaotic surface of our world. It’s a science of not being wrong, hammered out by centuries of hard work and argument. Armed with the tools of mathematics, we can see through to the true meaning of information we take for granted: How early should you get to the airport? What does “public opinion” really represent? Why do tall parents have shorter children? Who really won Florida in 2000? And how likely are you, really, to develop cancer? How Not to Be Wrong presents the surprising revelations behind all of these questions and many more, using the mathematician’s method of analyzing life and exposing the hard-won insights of the academic community to the layman—minus the jargon.
Ellenberg chases mathematical threads through a vast range of time and space, from the everyday to the cosmic, encountering, among other things, baseball, Reaganomics, daring lottery schemes, Voltaire, the replicability crisis in psychology, Italian Renaissance painting, artificial languages, the development of non-Euclidean geometry, the coming obesity apocalypse, Antonin Scalia’s views on crime and punishment, the theology of slime molds, what Facebook can and can’t figure out about you, and the existence of God.
Ellenberg pulls from history as well as from the latest theoretical developments to provide those not trained in math with the knowledge they need. Math, as Ellenberg says, is “an atomic-powered prosthesis that you attach to your common sense, vastly multiplying its reach and strength.” With the tools of mathematics in hand, you can understand the world in a deeper, more meaningful way. How Not to Be Wrong will show you how.

The worlds of visual art and mathematics beautifully unite in this spectacular volume by award-winning writer Stephen Ornes. He explores the growing sensation of math art, presenting such pieces as a colorful crocheted representation of non-Euclidian geometry that looks like sea coral and a 65-ton, 28-foot-tall bronze sculpture covered in a space-filling curve. We learn the artist's story for every work, plus the mathematical concepts and equations behind the art.

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.

Academic life in Cambridge especially in Trinity College is viewed through the eyes of one of its greatest figures. Most of Prof. Littlewood's earlier work is presented along with a wealth of new material.

Thirty Lectures on Classic Mathematics

Coffee Time in Memphis

The Power of Mathematical Thinking

An Outer View of the Inner World

Pi 3.14159 Mathematical Constant Infinite Decimal Ratio of a Circle Physics I Love Math Numbers Mathematics Enthusiast Archimedes Constant Solve Equations Interesting Science Coffee Table Book Gift for Adults and Kids

Opt Art

Agbraba

How both logical and emotional reasoning can help us live better in our post-truth world
In a world where fake news stories change election outcomes, has rationality become futile? In The Art of Logic in an Illogical World, Eugenia Cheng throws a lifeline to readers drowning in the illogic of contemporary life. Cheng is a mathematician, so she knows how to make an airtight argument. But even for her, logic sometimes falls prey to emotion, which is why she still fears flying and eats more cookies than she should. If a mathematician can't be logical, what are we to do? In this book, Cheng reveals the inner workings and limitations of logic, and explains why logic – for example, emotion – is vital to how we think and communicate. Cheng shows us how to use logic and algotic together to navigate a world awash in bigotry, mansplaining, and manipulative memes. Insightful, useful, and funny, this essential book is for anyone who wants to think more clearly.

The art of origami, or paper folding, is carried out using a square piece of paper to obtain attractive figures of animals, flowers or other familiar figures. It is easy to see that origami has links with geometry. Creases and edges represent lines, intersecting creases and edges make angles, while the intersections themselves represent points. Because of its manipulative and experiential nature, origami could become an effective context for the learning and teaching of geometry.In this unique and original book, origami is an object of mathematical exploration. The activities in this book differ from ordinary origami in that no figures of objects result. Rather, they lead the reader to study the effects of the folding and seek patterns. The experimental approach that characterizes much of science activity can be recognized throughout the book, as the manipulative nature of origami allows much experimenting, comparing, visualizing, discovering and conjecturing. The reader is encouraged to fill in all the proofs, for his/her own satisfaction and for the sake of mathematical completeness. Thus, this book provides a useful, alternative approach for reinforcing and applying the theorems of high school mathematics.

This volume celebrating the 60th birthday of B!a Bollob's presents the state of the art in combinatorics.

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 Dorfi, 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.

Stories of Resilience Along the Mathematical Journey

A Cultural History

The Mathematics of Unpredictability, from the Weather to the Stock Market

The Art of Logic in an Illogical World

Stories from Mathematics

Everyday Chaos

The Art of Mathematics ICM Edition

Have fun with mathematics and discover the value of n Pi in this book featuring about 240,000 digits of Pi. Great gift for kids of all ages as well as adults, anyone with an appreciation for mathematics, logical equations, problem solving, aspiring scientists, physicists and more.

The world's greatest mental mathematical magician takes us on a spellbinding journey through the wonders of numbers (and more) "Arthur Benjamin . . . joyfully shows you how to make nature's numbers dance." -- Bill Nye (the science guy)
The Magic of Math is the math book you wish you had in school. Using a delightful assortment of examples—from ice-cream scoops and poker hands to measuring mountains and making magic squares—this book reveals in key mathematical fields including arithmetic, algebra, geometry, and calculus, plus Fibonacci numbers, infinity, and, of course, mathematical magic tricks. Known throughout the world as the “mathemagician,” Arthur Benjamin mixes mathematics and magic to make the subject fun, attractive, and easy to understand for math fan and math-phobic alike. “A positively joyful exploration of mathematics.” -- Publishers Weekly, starred review
“Each [trick] is more dazzling than the last.” -- Physics World

Mathematical craftwork has become extremely popular, and mathematicians and crafters alike are fascinated by the relationship between their crafts. The focus of this book, written for mathematicians, needleworkers, and teachers of mathematics, is on the relationship between mathematics and the fiber arts (including knitting, crocheting, cross-stitch, and quilting). Each chapter starts with an overview of the mathematics and the needlework at a level understandable to both mathematicians and needleworkers, followed by more technical sections discussing the mathematics, how to introduce the mathematics in the classroom through needlework, and how to make the needlework project, including patterns and instructions.

The book consists of thirty lectures on diverse topics, covering much of the mathematical landscape rather than focusing on one area. The reader will learn numerous results that often belong to neither the standard undergraduate nor graduate curriculum and will discover connections between classical and contemporary ideas in algebra, combinatorics, geometry, and topology. The reader's effort will be rewarded in seeing the harmony of each subject. The common thread in the selected subjects is their illustration of the unity and beauty of mathematics. Most lectures contain exercises, and solutions or answers are given to selected exercises. A special feature of the book is an abundance of drawings (more than four hundred), artwork by an accomplished artist, and about a hundred portraits of mathematicians. Almost every lecture contains surprises for even the seasoned researcher.

Combinatorics and Probability

Illustrating Mathematics

Dictionary of Mathematics Terms

How to Bake Pi

The Magic of Math

Mathematical Omnibus

An Edible Exploration of the Mathematics of Mathematics

The Book of Math explores the truly fascinating side of math with forty fully illustrated spreads looking at a wide range of captivating themes, such as math in space, sports calculations, symmetry in nature, weird math facts, math in art, and mind-boggling number conundrums.

The subject of mathematics is not something distant, strange, and abstract that you can only learn about—and often dislike—in school. It is in everyday situations, such as housekeeping, communications, traffic, and weather reports. Taking you on a trip into the world of mathematics, Do I Count? Stories from Mathematics describes in a clear and captivating way the people behind the numbers and the places where mathematics is made. Written by top scientist and engaging storyteller Günter M. Ziegler and translated by Thomas von Foerster, the book presents mathematics and mathematicians in a manner that you have not previously encountered. It guides you on a scenic tour through the field, pointing out where fields were useful in constructing which theorems and which notebooks list the prizes for solving particular problems. Forgoing esoteric areas, the text relates mathematics to celebrities, history, travel, politics, science and technology, weather, clever puzzles, and the future. Can bees count? Is 13 bad luck? Are there equations for everything? What ’s the real practical value of the Pythagorean Theorem? Are there Sudoku puzzles with fewer than 17 entries and just one solution? Where and how do mathematicians work? Who invented proofs and why do we need them? Why is there no Nobel Prize for mathematics? What kind of life did Paul Erd ’s lead? Find out the answers to these and other questions in this entertaining book of stories. You ’ ll see that everyone counts, but no computation is needed.

In this large-format book, lavishly illustrated in color throughout, Allan McRobie takes the reader on an alluring exploration of the beautiful curves that shape our world—from our bodies to Salvador Dalí's paintings and the space-time fabric of the universe itself. The book focuses on seven curves—the fold, cusp, swallowtail, and butterfly, plus the hyperbolic, elliptical, and parabolic “umbilics”—and describes the surprising origins of their taxonomy in the catastrophe theory of mathematician René Thom.

The ultimate crash course in mathematics—covering key thinkers, theories, discoveries, and concepts—each explained on a single page! From infinity to Pythagoras and beyond, Instant Mathematics pulls together pivotal mathematical theorems, thinkers, and breakthroughs into one concise volume. Every page offers a “cheat sheet” on an individual subject, displaying pertinent facts in bite-size chunks of accessible text and graphics. Flip through and learn about everything from the concept of Zero to the Riemann Hypothesis, and from Pierre de Fermat to

John Nash and Roger Penrose. If you’ re hungry for knowledge and short on time, this is the one-stop mathematics resource for you!

John Nash Book

Linear Analysis

The Divine Beauty of Mathematics

Key Thinkers, Theories, Discoveries and Concepts Explained on a Single Page

The Little Book of Mathematical Principles, Theories & Things

The Art of Mathematics – Take Two

Open Problems in Mathematics

This is a cultural history of mathematics and art, from antiquity to the present. Mathematicians and artists have long been on a quest to understand the physical world they see before them and the abstract objects they know by thought alone. Taking readers on a tour of the practice of mathematics and the philosophical ideas that drive the discipline, Lynn Gamwell points out the important ways mathematical concepts have been expressed by artists. Sumptuous illustrations of artworks and cogent math diagrams are featured in Gamwell's comprehensive exploration. Gamwell begins by describing mathematics from antiquity to the Enlightenment, including Greek, Islamic, and Asian mathematics. Then focusing on modern culture, Gamwell traces mathematicians' search for the foundations of their science, such as David Hilbert's conception of an arrangement of meaning-free signs, as well as artists' search for the essence of their craft, such as Aleksandr Rodchenko's monochrome paintings. She shows that self-reflection is inherent to the practice of both modern mathematics and art, and that this introspection points to a deep resonance between the two fields: Kurt Gödel posed questions about the nature of mathematics in the language of mathematics and Jasper Johns asked "What is art?" in the vocabulary of art. Throughout, Gamwell describes the personalities and cultural environments of a multitude of mathematicians and artists, from Gottlob Frege and Benoit Mandelbrot to Max Bill and Xu Bing. Mathematics and Art demonstrates how mathematical ideas are embodied in the visual arts and will enlighten all who are interested in the complex intellectual pursuits, personalities, and cultural settings that connect these vast disciplines.

Lovers of mathematics, young and old, professional and amateur, will enjoy this book. It is mathematics with fun: a collection of attractive problems that will delight and test readers. Many of the problems are drawn from the large number that have entertained and challenged students, guests and colleagues over the years during afternoon tea. The problems have their roots in many areas of mathematics. They vary greatly in difficulty: some are very easy, but most are far from trivial, and quite a few rather hard. Many provide substantial and surprising results that form the tip of an iceberg, providing an introduction to an important topic. To enjoy and appreciate the problems, readers should browse the book choosing one that looks particularly enticing, and think about it on and off for a while before resorting to the hint or the solution. Follow threads for an enjoyable and enriching journey through mathematics.

This book is for anyone who wishes to illustrate their mathematical ideas, which in our experience means everyone. It is organized by material, rather than by subject area, and purposefully emphasizes the process of creating things, including discussions of failures that occurred along the way. As a result, the reader can learn from the experiences of those who came before, and will be inspired to create their own illustrations. Topics illustrated within include prime numbers, fractals, the Klein bottle, Borromean rings, tilings, space-filling curves, knot theory, billiards, complex dynamics, algebraic surfaces, groups and prime ideals, the Riemann zeta function, quadratic fields, hyperbolic space, and hyperbolic 3-manifolds. Everyone who opens this book should find a type of mathematics with which they identify. Each contributor explains the mathematics behind their illustration at an accessible level, so that all readers can appreciate the beauty of both the object itself and the mathematics behind it.

Publisher description

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

The Lines of Beauty That Connect Mathematics, Art, and the Nude

From Mathematical Optimization to Visual Design

Origamics

Book of Proof

Mathematicians

The Art of Mathematics

This book is about algebra. This is a very old science and its gems have lost their charm for us through everyday use. We have tried in this book to refresh them for you. The main part of the book is made up of problems. The best way to deal with them is: Solve the problem by yourself - compare your solution with the solution in the book (if it exists) - go to the next problem. However, if you have difficulties solving a problem (and some of them are quite difficult), you may read the hint or start to read the solution. If there is no solution in the book for some problem, you may skip it (it is not heavily used in the sequel) and return to it later. The book is divided into sections devoted to different topics. Some of them are very short, others are rather long. Of course, you know arithmetic pretty well. However, we shall go through it once more, starting with easy things. 2 Exchange of terms in addition Let's add 3 and 5: 3+5=8. And now change the order: 5+3=8. We get the same result. Adding three apples to five apples is the same as adding five apples to three - apples do not disappear and we get eight of them in both cases. 3 Exchange of terms in multiplication Multiplication has a similar property. But let us first agree on notation. A fast-reference source for advanced high school and college math students. Also useful to professionals who use math on the job. Approximately 700 math terms are defined. Includes illustrative diagrams.

A fast-reference source for advanced high school and college math students. Also useful to professionals who use math on the job. Approximately 700 math terms are defined. Includes illustrative diagrams. Photographs accompanied by autobiographical text written by each mathematician.

An in-depth account of graph theory, written for serious students of mathematics and computer science. It reflects the current state of the subject and emphasises connections with other branches of pure mathematics. Recognising that graph theory is one of several courses competing for the attention of a student, the book contains extensive descriptive passages designed to convey the flavour of the subject and to arouse interest. In addition to a modern treatment of the classical areas of graph theory, the book presents a detailed account of newer topics, including Szemeréds Regularity Lemma and its use, Shelahs extension of the Hales-Jewett Theorem, the precise nature of the phase transition in a random graph process, the connection between electrical networks and random walks on graphs, and the Tutte polynomial and its cousins in knot theory. Moreover, the book contains over 600 well thought-out exercises: although some are straightforward, most are substantial, and some will stretch even the most able reader.

Making Mathematics with Needlework

Beautiful Geometry

Theory and Applications

Instant Mathematics

Living Proof

Littlewood's Miscellany

The Art of Mathematics South Asian Edition

At its 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.

This book is an introduction to the language and standard proof methods of mathematics. It is a bridge from the computational courses (such as calculus or differential equations) that students typically encounter in their first year of college to a more abstract outlook. It lays a foundation for more theoretical courses such as topology, analysis and abstract algebra. Although it may be more meaningful to the student who has had some calculus, there is really no prerequisite other than a measure of mathematical maturity.

What is math? How exactly does it work? And what do three siblings trying to share a cake have to do with it? InHow to Bake Pi, math professor Eugenia Cheng provides an accessible introduction to the logic and beauty of mathematics, powered, unexpectedly, by insights from the kitchen. We learn how the béchamel in a lasagna can be a lot like the number five, and why making a good custard proves that math is easy but life is hard. At the heart of it all is Cheng’s work on category theory, a cutting-edge “mathematics of mathematics,” that is about figuring out how math works. Combined with her infectious enthusiasm for cooking and true zest for life, Cheng’s perspective on math is a funny journey through a vast territory no popular book on math has explored before. So, what is math? Let’s look for the answer in the kitchen.

A fun and stunningly illustrated introduction to the art of linear optimization
Linear optimization is a powerful modeling method for discovering the best solution to a problem among a set of available alternatives. It is one of today’s most important branches of mathematics and computer science—and also a surprisingly rich medium for creating breathtaking works of art. Opt Art takes readers on an entertaining tour of linear optimization and its applications, showing along the way how it can be used to design visual art. Robert Bosch provides a lively and accessible introduction to the geometric, algebraic, and algorithmic foundations of optimization. He presents classical applications, such as the legendary Traveling Salesman Problem, and shows how to adapt them to make optimization art—opt art. Each chapter in this marvelously illustrated book begins with a problem or puzzle and demonstrates how the solution can be derived using a host of artistic methods and media, including 3D printing, laser cutting, and computer-controlled machining. Bosch focuses on mathematical modeling throughout—converting a problem into a workable mathematical form, solving it using optimization techniques, and examining the results, which can take the form of mosaics, line drawings, and even sculpture. All you need is some high-school algebra, geometry, and calculus to follow along. Featuring more than a hundred illustrations and photos of Bosch’s own art, Opt Art demonstrates how mathematics and computing can be used to create beauty and express emotion through amazing works of art.

Mathematics: A Very Short Introduction

Math Art

Mathematics and Art

The Value of ? 240,000 Digits

The Book of Math

The Art of More

Truth, Beauty, and Equations

Chaos and complexity explained, with illuminating examples ranging from unpredictable pendulums to London's wobbly Millennium Bridge. The math we are taught in school is precise and only deals with simple situations. Reality is far more complex. Trying to understand a system with multiple interacting components—the weather, for example, or the human body, or the stock market—means dealing with two factors: chaos and complexity. If we don't understand these two essential subjects, we can't understand the real world. In Everyday Chaos, Brian Clegg explains chaos and complexity for the general reader, with an accessible, engaging text and striking full-color illustrations. By chaos, Clegg means a system where complex interactions make predicting long-term outcomes nearly impossible; complexity means complex interacting systems that have new emergent properties that make them more than the sum of their parts. Clegg illustrates these phenomena with discussions of predictable randomness, the power of probability, and the behavior of pendulums. He describes what Newton got wrong about gravity; how feedback kept steam engines from exploding; and why weather produces chaos. He considers the stock market, politics, bestseller lists, big data, and the wobbly Millennium Bridge as examples of chaotic systems, and he explains how a better understanding of chaos helps scientists predict more accurately the risk of catastrophic Earth-asteroid collisions. We learn that our brains are complex, self-organizing systems; that the structure of snowflakes exemplifies emergence; and that life itself has been shown to be an emergent property of a complex system. 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.

The Golden Ratio examines the presence of this divine number in art and architecture throughout history, as well as its ubiquity among plants, animals, and even the cosmos. This gorgeous book—with layflat dimensions that closely approximate the golden ratio—features clear, enlightening, and entertaining commentary alongside stunning full-color illustrations by Venezuelan artist and architect Rafael Araujo. 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. This book invites you to take a new look at this timeless topic, with a compilation of research and information worthy of a text book, accompanied by over 200 beautiful color illustrations that transform this into the ultimate coffee table book. Author Gary Meisner shares the results of his twenty-year investigation and collaboration with thousands of people across the globe in dozens of professions and walks of life. The evidence will close the gaps of understanding related to many claims of the golden ratio's appearances and applications, and present new findings to take our knowledge further yet. Whoever you are, and whatever you may know about this topic, you'll find something new, interesting, and informative in this book, and may find yourself challenged to see, apply, and share this unique number of mathematics and science in new ways.

Revised and updated introduction to functional analysis.

Mathematical Explorations Through Paper Folding

Handbook of Mathematical Induction

The Golden Ratio

An Introductory Course

The Seduction of Curves

99 Variations on a Proof

Tea Time in Cambridge

The goal in putting together this unique compilation was to present the current status of the solutions to some of the most essential open problems in pure and applied mathematics. Emphasis is also given to problems in interdisciplinary research for which mathematics plays a key role. This volume comprises highly selected contributions by some of the most eminent mathematicians in the international mathematical community on longstanding problems in very active domains of

mathematical research. A joint preface by the two volume editors is followed by a personal farewell to John F. Nash, Jr. written by Michael Th. Rassias. An introduction by Mikhail Gromov highlights some of Nash's legendary mathematical achievements. The treatment in this book includes open problems in the following fields: algebraic geometry, number theory, analysis, discrete mathematics, PDEs, differential geometry, topology, K-theory, game theory, fluid mechanics, dynamical systems and ergodic theory, cryptography, theoretical computer science, and more. Extensive discussions surrounding the progress made for each problem are designed to reach a wide community of readers, from graduate students and established research mathematicians to physicists, computer scientists, economists, and research scientists who are looking to develop essential and modern new methods and theories to solve a variety of open problems.

Handbook of Mathematical Induction: Theory and Applications shows how to find and write proofs via mathematical induction. This comprehensive book covers the theory, the structure of the written proof, all standard exercises, and hundreds of application examples from nearly every area of mathematics. In the first part of the book, the author discusses

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 Ordning 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—Ordning 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, Ordning 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.

Step-by-step instructions and nearly 200 simple diagrams show beginners how to make cards vanish and reappear, get coins to pass through solid objects, make articles mysteriously travel from one location to another, and more.

Modern Graph Theory

Ten Papers and Ten Projects

Solving for x and Figuring Out Why

Do I Count?

How Mathematics Created Civilization

How Not to Be Wrong

An exquisite visual celebration of the 2,500-year history of geometry If you've ever thought that mathematics and art don't mix, this stunning visual history of geometry will change your mind. As much a work of art as a book about mathematics, Beautiful Geometry presents more than sixty exquisite color plates illustrating a wide range of geometric patterns and theorems, accompanied by brief accounts of the fascinating history and people behind each. With artwork by Swiss artist Eugen Jost and text by math historian Eli Maor, this unique celebration of geometry is a feast for the eyes and the mind. The result is a delightful and informative illustrated tour through the 2,500-year-old history of one of the most important branches of mathematics.

The Art of MathematicsCoffee Time in MemphisCambridge University Press

This little book makes serious math simple—with more than 120 laws, theorems, paradoxes, and more explained in jargon-free terms. The Little Book of Mathematical Principles provides simple, clear explanations for the principles, equations, paradoxes, laws, and theorems that form the basis of modern mathematics. It is a refreshingly engaging tour of Fibonacci numbers, Euclid's Elements, and Zeno's paradoxes, as well as other fundamental principles such as chaos theory, game theory, and the game of life. Renowned mathematics author Dr. Robert Solomon sits down with the author to discuss the book's content and the author's approach to writing it.

What is the greatest pyramid?, What is a perfect number?, and is there a theory for stacking oranges?

Martin Gardner's Table Magic