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Features step-by-step examples based on actual data and connects fundamental mathematical modeling skills and decision making concepts to everyday applicability. Featuring key linear programming, matrix, and probability concepts, *Finite Mathematics: Models and Applications* emphasizes cross-disciplinary applications that relate mathematics to everyday life. The book provides a unique combination of practical mathematical applications to illustrate the wide use of mathematics in fields ranging from business, economics, finance, management, operations research, and the life and social sciences. In order to emphasize the main concepts of each chapter, *Finite Mathematics: Models and Applications* features plentiful pedagogical elements throughout such as special exercises, end notes, hints, select solutions, biographies of key mathematicians, boxed key principles, a glossary of important terms and topics, and an overview of use of technology. The book encourages the modeling of linear programs and their solutions and uses common computer software programs such as LINDO. In addition to extensive chapters on probability and statistics, principles and applications of matrices are included as well as topics for enrichment such as the Monte Carlo method, game theory, kinship matrices, and dynamic programming. Supplemented with online instructional support materials, the book features coverage including: Algebra Skills Mathematics of Finance Matrix Algebra Geometric Solutions Simplex Methods Application Models Set and Probability Relationships Random Variables and Probability Distributions Markov Chains Mathematical Statistics Enrichment in Finite Mathematics. An ideal textbook, *Finite Mathematics: Models and Applications* is intended for students in fields from entrepreneurial and economic to environmental and social science, including many in the arts and humanities. This concise text is based on the axiomatic internal set theory approach. Theoretical topics include idealization, standardization, and transfer, real numbers and numerical functions, continuity, differentiability, and integration. Applications cover invariant means, approximation of functions, differential equations, more. Exercises, hints, and solutions. "Mathematics teaching at its best." — *European Journal of Physics*. 1988 edition. Following the great success of the earlier books, this fourth book in the Mathematics Recovery series equips teachers with detailed pedagogical knowledge and resources for teaching number to 7 to 11-year olds. Drawing on extensive programs of research, curriculum development, and teacher development, the book offers a coherent, up-to-date approach emphasizing computational fluency and the progressive development of students' mathematical sophistication. The book is organized in key domains of number instruction, including structuring numbers 1 to 20, knowledge of number words and numerals, conceptual place value, mental computation, written computation methods, fractions, and early algebraic reasoning. Features include: fine-grained progressions of instruction within each domain; detailed descriptions of students' strategies and difficulties; assessment tasks with notes on students' responses; classroom-ready instructional activities; This book is designed for classroom and intervention teachers, special education teachers and classroom assistants. The book is an invaluable resource for mathematics advisors and coaches, learning support staff, numeracy consultants, curriculum developers, teacher educators and researchers. An essential undergraduate textbook on algebra, topology, and calculus *An Introduction to Analysis* is an essential primer on basic results in algebra, topology, and calculus for undergraduate students considering advanced degrees in mathematics. Ideal for use in a one-year course, this unique textbook also introduces students to rigorous proofs and formal mathematical writing—skills they need to excel. With a range of problems throughout, *An Introduction to Analysis* treats  $n$ -dimensional calculus from the beginning—differentiation, the Riemann integral, series, and differential forms and Stokes's theorem—enabling students who are serious about mathematics to progress quickly to more challenging topics. The book discusses basic material on point set topology, such as normed and metric spaces, topological spaces, compact sets, and the Baire category theorem. It covers linear algebra as well, including vector spaces, linear mappings, Jordan normal form, bilinear mappings, and normal mappings. Proven in the classroom, *An Introduction to Analysis* is the first textbook to bring these topics together in one easy-to-use and comprehensive volume. Provides a rigorous introduction to calculus in one and several variables Introduces students to basic topology Covers topics in linear algebra, including matrices, determinants, Jordan normal form, and bilinear and normal mappings Discusses differential forms and Stokes's theorem in  $n$  dimensions Also covers the Riemann integral, integrability, improper integrals, and series expansions Relations between groups and sets, results and methods of abstract algebra in terms of number theory and geometry, and noncommutative and homological algebra. Solutions. 2006 edition. Empower students to be the change—join the teaching mathematics for social justice movement! We live in an era in which students have —through various media and their lived experiences— a more visceral experience of social, economic, and environmental injustices. However, when people think of social justice, mathematics is rarely the first thing that comes to mind. Through model lessons developed by over 30 diverse contributors, this book brings seemingly abstract high school mathematics content to life by connecting it to the issues students see and want to change in the world. Along with expert guidance from the lead authors, the lessons in this book explain how to teach mathematics for self- and community-empowerment. It walks teachers step-by-step through the process of using mathematics—across all high school content domains—as a tool to explore, understand, and respond to issues of social injustice including: environmental injustice; wealth inequality; food insecurity; and gender, LGBTQ, and racial discrimination. This book features: Content cross-referenced by mathematical concept and social issues Downloadable instructional materials for student use User-friendly and logical interior design for daily use Guidance for designing and implementing social justice lessons driven by your own students' unique passions and challenges Timelier than ever, teaching mathematics through the lens of social justice will connect content to students' daily lives, fortify their mathematical understanding, and expose them to issues that will make them responsive citizens and leaders in the future. *Mathematics for Physical Chemistry* is the ideal supplementary text for practicing chemists and students who want to sharpen their mathematics skills while enrolled in general through physical chemistry courses. This book specifically emphasizes the use of mathematics in the context of physical chemistry, as opposed to being simply a mathematics text. This 4e includes new exercises in each chapter that provide practice in a technique immediately after discussion or example and encourage self-study. The early chapters are constructed around a sequence of mathematical topics, with a gradual progression into more advanced material. A final chapter discusses mathematical topics needed in the analysis of experimental data. Numerous examples and problems interspersed throughout the presentations Each extensive chapter contains a preview and objectives Includes topics not found in similar books, such as a review of general algebra and an introduction to group theory Provides chemistry-specific instruction without the distraction of abstract concepts or theoretical issues in pure mathematics This volume is a collection of published papers by Robert Steinberg. It contains all of his published papers on group theory, including those on "special" representations (now called Steinberg

representations), Coxeter groups, regular nilpotent elements and Galois cohomology. After each paper, there is a section, "Comments on the papers", that contains minor corrections and clarifications and explains how ideas and results have evolved and been used since they first appeared. The inventor of the equals sign (=), Robert Recorde (1510?-1558) was the first English-writing mathematics educator: this book celebrates his work. Imagine that you assign a math problem and your students, instead of getting discouraged after not solving it on the first attempt, start working harder--as if on a quest to figure out the answer. They talk to each other and enthusiastically share their discoveries. What could possibly make this fantastic scenario come true? The answer is: the Open Middle math problems and strategies in this book. Open Middle Math by Robert Kaplinsky gives middle and high school teachers the problems and planning guidance that will encourage students to see mathematics in an entirely different light. These challenging and rewarding Open Middle math problems will help you see your students build genuine conceptual understanding, perseverance, and creativity. Inside, you'll learn how to: Implement Open Middle math problems that are simultaneously accessible for both students who are struggling and those looking for more challenge. Select and create Open Middle math problems that will help you detect students' misconceptions and strengthen their conceptual understanding. Prepare for and facilitate powerful classroom conversations using Open Middle math problems. Access resources that will help you continue learning beyond this book. With these practical and intuitive strategies, extensive resources, and Robert's own stories about his journey learning to use Open Middle math problems successfully, you will be able to support, challenge, and motivate all your students. Workshop math problems guidebook filled with practical applications for construction, workshop, and the home. For the past 50 years, the Mathematics Dictionary has met the needs of students, scientists, engineers, and others who need to review mathematical terms and concepts. Much more than a mere word dictionary, this source offers cogent explanations of a wide range of mathematical ideas -- in a format that makes it easy to locate the meaning of terms at the level of complexity required. This textbook covers the requirements of students taking pure mathematics as part of a single-maths A-level exam. It assumes a starting point of the equivalent of Level 7 in the National Curriculum or GCSE Grade B/C. A witty, conversational, and accessible tour of math's profoundest mysteries. Mathematical symbols, for mathematicians, store worlds of meaning, leap continents and centuries. But we need not master symbols to grasp the magnificent abstractions they represent, and to which all art aspires. Through language, anyone can come to delight in the works of mathematical art, which are among our kind's greatest glories. Taking the concept of infinity, in its countless guises, as a starting point and a helpful touchstone, the founders of Harvard's pioneering Math Circle program Robert and Ellen Kaplan guide us through the "Republic of Numbers," where we meet both its upstanding citizens and its more shadowy dwellers, explore realms where only the imagination can go, and grapple with math's most profound uncertainties, including the question of truth itself--do we discover mathematical principles, or invent them? The best 6th grade study guide to prepare your middle school student for mathematic exams. The book teaches children to understand basic math concepts, skills, and strategies of the Common Core Curriculum Standards and the Regents Mathematics exam with detailed step by step explanations to solving typical exam problems. It's like studying with your own private tutor! This book features a user friendly format perfect for browsing, research, and review. Three practice test and answer keys included; covering review topics: Number Sense, Algebra, Geometry, Measurement, Probability and Statistics. All content aligned to state and national standards. "In this sparkling narrative, mathematics is indeed set free." -Michael Shermer, author of *The Believing Brain* In classrooms around the world, Robert and Ellen Kaplan's pioneering Math Circle program, begun at Harvard, has introduced students ages six to sixty to the pleasures of mathematics, exploring topics that range from Roman numerals to quantum mechanics. In *Out of the Labyrinth*, the Kaplans reveal the secrets of their highly successful approach, which embraces the exhilarating joy of math's "accessible mysteries." Stocked with puzzles, colorful anecdotes, and insights from the authors' own teaching experience, *Out of the Labyrinth* is both an engaging and practical guide for parents and educators, and a treasure chest of mathematical discoveries. For any reader who has felt the excitement of mathematical discovery--or tried to convey it to someone else--this volume will be a delightful and valued companion. Steps forward in mathematics often reverberate in other scientific disciplines, and give rise to innovative conceptual developments or find surprising technological applications. This volume brings to the forefront some of the proponents of the mathematics of the twentieth century, who have put at our disposal new and powerful instruments for investigating the reality around us. The portraits present people who have impressive charisma and wide-ranging cultural interests, who are passionate about defending the importance of their own research, are sensitive to beauty, and attentive to the social and political problems of their times. What we have sought to document is mathematics' central position in the culture of our day. Space has been made not only for the great mathematicians but also for literary texts, including contributions by two apparent interlopers, Robert Musil and Raymond Queneau, for whom mathematical concepts represented a valuable tool for resolving the struggle between 'soul and precision.' Gets them engaged. Keeps them engaged. Bob Blitzer's use of realistic applications instantly piques students' curiosity about the presence of mathematical concepts in the world around them. These applications are apparent throughout the entire program--from his relatable examples, friendly writing style, and thought-provoking features in the textbook, to the enhanced digital resources in the MyMathLab course. Blitzer pulls from topics that are relevant to college students, often from pop culture and everyday life, to ensure that students will actually use their learning resources to achieve success. With an expansion of the series to now include a Developmental Math "all-in-one" text (with content spanning prealgebra through intermediate algebra), and with an enhanced media program accompanying this revision, developmental students at all levels will see how math applies to their daily lives and culture. Also available with MyMathLab MyMathLab(R) is an online homework, tutorial, and assessment program designed to work with this text to engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them absorb course material and understand difficult concepts. Note: You are purchasing a standalone product; MyMathLab does not come packaged with this content. Students, if interested in purchasing this title with MyMathLab, ask your instructor for the correct package ISBN and Course ID. Instructors, contact your Pearson representative for more information. If you would like to purchase both the physical text and MyMathLab, search for: 0134269128 / 9780134269122 \* Developmental Mathematics plus MyMathLab -- Access Card Package Package consists of: 0134268334 / 9780134268330 \* Developmental Mathematics 0321262522 / 9780321262523 \* MyMathLab -- Valuepack Access Card Offers straightforward advice, inspiration and support for mathematics teachers whether in training or newly qualified. Based on the best research and practice available, it offers a wide range of tried and tested approaches that succeed in secondary classrooms. Achieve the best possible standard with this bestselling book of traditional practice and guidance - now in colour! First Aid in Mathematics provides all the help and support needed for learning and practising Mathematics. It offers comprehensive coverage of core mathematical topics in clear and accessible language. It is suitable for both native English speakers and students of English as a second language and can be used in class, or as a reference and revision book. - Develops a strong basis of understanding with core topics covered in clear and accessible language - Improves student's ability to work through problems with plenty of practice exercises and revision tests - Reflects its international readership with terms and information that are appropriate for students worldwide. Mathematical Physics is an introduction to such basic mathematical structures as groups, vector spaces, topological spaces, measure spaces, and Hilbert space. Geroch uses category theory to emphasize both the interrelationships among different structures and the unity of mathematics. Perhaps the most valuable feature of the book is the illuminating intuitive discussion of the "whys" of proofs and of axioms and definitions. This book, based on Geroch's University of Chicago course, will be especially helpful to those working in theoretical physics, including such areas as relativity, particle physics, and astrophysics. Stimulating, unique book explores the possibilities of mathematical drawing through compass constructions and computer graphics. Over 100 full-page drawings demonstrate possibilities: five-point egg, golden ratio, 17-gon, plughole vortex, blancmange curve, pentasnow, turtle geometry, many more. Exercises (with answers). "A wealth of intriguing and lovely ideas." — Information Technology & Learning. Philosophy of Mathematics is clear and engaging, and student friendly The book discusses the great philosophers and the importance of mathematics to their thought. Among topics discussed in the book are the mathematical image, platonism, picture-proofs, applied mathematics, Hilbert and Godel, knots and notation definitions, picture-proofs and Wittgenstein, computation, proof and conjecture. This user-friendly resource presents an inquiry-based approach to classroom instruction and covers beginning number and early counting strategies as well as multi-digit addition, subtraction, multiplication, and division. What can you do with a degree in math? This book addresses this question with 125 career profiles written by people

with degrees and backgrounds in mathematics. With job titles ranging from sports analyst to science writer to inventory specialist to CEO, the volume provides ample evidence that one really can do nearly anything with a degree in mathematics. These professionals share how their mathematical education shaped their career choices and how mathematics, or the skills acquired in a mathematics education, is used in their daily work. The degrees earned by the authors profiled here are a good mix of bachelors, masters, and PhDs. With 114 completely new profiles since the third edition, the careers featured within accurately reflect current trends in the job market. College mathematics faculty, high school teachers, and career counselors will all find this a useful resource. Career centers, mathematics departments, and student lounges should have a copy available for student browsing. In addition to the career profiles, the volume contains essays from career counseling professionals on the topics of job-searching, interviewing, and applying to graduate school.

The connective topological modular forms spectrum,  $tmf$ , is in a sense initial among elliptic spectra, and as such is an important link between the homotopy groups of spheres and modular forms. A primary goal of this volume is to give a complete account, with full proofs, of the homotopy of  $tmf$  and several  $tmf$ -module spectra by means of the classical Adams spectral sequence, thus verifying, correcting, and extending existing approaches. In the process, folklore results are made precise and generalized. Anderson and Brown-Comenetz duality, and the corresponding dualities in homotopy groups, are carefully proved. The volume also includes an account of the homotopy groups of spheres through degree 44, with complete proofs, except that the Adams conjecture is used without proof. Also presented are modern stable proofs of classical results which are hard to extract from the literature. Tools used in this book include a multiplicative spectral sequence generalizing a construction of Davis and Mahowald, and computer software which computes the cohomology of modules over the Steenrod algebra and products therein. Techniques from commutative algebra are used to make the calculation precise and finite. The  $H^\infty$  ring structure of the sphere and of  $tmf$  are used to determine many differentials and relations.

"Robert Devaney communicates his deep understanding as well as his enthusiasm for chaos, fractals, and dynamical systems. Starting at a level suitable for well-prepared high school students, he tells the mathematical story behind these fascinating topics. Equations and graphs are clearly shown with computer-generated characters, and Devaney's explanations are lucid and instructive. Illustrating the mathematics are forays into the colorful, unpredictable world of fractals and Julia sets. Devaney explains how the computer is used to generate the pictures and shows how the various colors are chosen for graphical representations ... Though the mathematical background required is elementary, those at the collegiate level and beyond will appreciate ... the clarity of exposition and the sheer beauty of the graphics."--Container.

Fixed Income Mathematics is an easy-to-understand introduction to the mathematics of common fixed income instruments. This book offers explanations, exercises, and examples without demanding sophisticated mathematics from the reader. Not only does the author use his business and teaching experience to highlight the fundamentals of investment and management decision-making, but he also offers questions and exercises that suggest the applicability of fixed income mathematics. Written for the reader with a general mathematics background, this self-teaching book is suffused with examples that also make it a handy reference guide. It should serve as a gateway to financial mathematics and to increased competence in business analysis. International comparisons are used to illustrate how interest is compounded. This text will be a valuable resource for professional insurance and other actuaries who invest in bonds and who are concerned with inflation, asset-liability management, the time value of money, interest rates, rates of return, risk, and investment income. It will also appeal to MBA students and anyone seeking a general introduction or overview of the subject.

\* An easy-to-understand introduction to the mathematics of common fixed income instruments \* Offers students explanations, exercises, and examples without demanding sophisticated mathematics \* Uses international comparisons to illustrate how interest is compounded

A symbol for what is not there, an emptiness that increases any number it's added to, an inexhaustible and indispensable paradox. As we enter the year 2000, zero is once again making its presence felt. Nothing itself, it makes possible a myriad of calculations. Indeed, without zero mathematics as we know it would not exist. And without mathematics our understanding of the universe would be vastly impoverished. But where did this nothing, this hollow circle, come from? Who created it? And what, exactly, does it mean? Robert Kaplan's *The Nothing That Is: A Natural History of Zero* begins as a mystery story, taking us back to Sumerian times, and then to Greece and India, piecing together the way the idea of a symbol for nothing evolved. Kaplan shows us just how handicapped our ancestors were in trying to figure large sums without the aid of the zero. (Try multiplying CLXIV by XXIV). Remarkably, even the Greeks, mathematically brilliant as they were, didn't have a zero--or did they? We follow the trail to the East where, a millennium or two ago, Indian mathematicians took another crucial step. By treating zero for the first time like any other number, instead of a unique symbol, they allowed huge new leaps forward in computation, and also in our understanding of how mathematics itself works. In the Middle Ages, this mathematical knowledge swept across western Europe via Arab traders. At first it was called "dangerous Saracen magic" and considered the Devil's work, but it wasn't long before merchants and bankers saw how handy this magic was, and used it to develop tools like double-entry bookkeeping. Zero quickly became an essential part of increasingly sophisticated equations, and with the invention of calculus, one could say it was a linchpin of the scientific revolution. And now even deeper layers of this thing that is nothing are coming to light: our computers speak only in zeros and ones, and modern mathematics shows that zero alone can be made to generate everything. Robert Kaplan serves up all this history with immense zest and humor; his writing is full of anecdotes and asides, and quotations from Shakespeare to Wallace Stevens extend the book's context far beyond the scope of scientific specialists. For Kaplan, the history of zero is a lens for looking not only into the evolution of mathematics but into very nature of human thought. He points out how the history of mathematics is a process of recursive abstraction: how once a symbol is created to represent an idea, that symbol itself gives rise to new operations that in turn lead to new ideas. The beauty of mathematics is that even though we invent it, we seem to be discovering something that already exists. The joy of that discovery shines from Kaplan's pages, as he ranges from Archimedes to Einstein, making fascinating connections between mathematical insights from every age and culture. A tour de force of science history, *The Nothing That Is* takes us through the hollow circle that leads to infinity. How often do you use mathematics in your everyday life? You may set an alarm to wake up at a certain time, you may go for a run for a certain amount of distance, you might use a map powered by GPS coordinates to know how to get somewhere, and you may give yourself a certain amount of time get to your destination on time. We all use mathematics without thinking about it, and that has always been the case since the early human civilisations. Throughout history humans have been capable of sophisticated mathematical thinking to live, strive and survive, and many of the mathematical concepts invented by our early ancestors have evolved and are still used today. Did you know the binary number system used to power our digital technology was first employed in the Indus Valley over 4,000 years ago? Or that navigation systems like GPS use the mathematical concept of degrees that the Babylonians of Mesopotamia first began to use over 3,000 years ago. This book, *The Amazing Beginnings of Mathematics* explores the earliest origins of mathematics and their connections to the mathematics we use today. Whether you have a deep interest in mathematics and history or are someone who simply wonders, the engaging presentation and activities in this book will help you understand and appreciate the significant role of early civilisations in developing the concepts that underpin modern advances in mathematics. Also important to note that this book explores the non-European beginnings of mathematics - it is rare to find a mathematics history book that explores the contributions of the Aztec and Maya civilisation of Mesoamerica or the Inca of South America which this book does. Often mathematics is seen as confusing, intimidating, or exclusive to 'gifted' individuals. However, the authors Calvin and Robert believe that everyone can do well in mathematics with the right learning approach using interesting materials. This book features over 60 activity pages that have been woven throughout the discussion and designed to be accessible to a wide audience, usually beginning with students in the primary grades. These activities will teach you to multiply like an ancient Egyptian or work out the area of a field just like the Aztecs did! "The book is suitable as a text for a first course in numerical methods for mathematics students or students in neighboring fields, such as engineering, physics, and computer science. In general, the author assumes only a knowledge of calculus and linear algebra."--BOOK JACKET. 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 simplifies the ancient discipline of mathematics and provides fascinating answers to intriguing questions, such as: What is the greatest pyramid?, What is a perfect

number?, and Is there a theory for stacking oranges? "This accessible, applications-related introductory treatment explores some of the structure of modern symbolic logic useful in the exposition of elementary mathematics. Topics include axiomatic structure and the relation of theory to interpretation. No prior training in logic is necessary, and numerous examples and exercises aid in the mastery of the language of logic. 1959 edition"-- An Introduction to Mathematical Analysis is an introductory text to mathematical analysis, with emphasis on functions of a single real variable. Topics covered include limits and continuity, differentiability, integration, and convergence of infinite series, along with double series and infinite products. This book is comprised of seven chapters and begins with an overview of fundamental ideas and assumptions relating to the field operations and the ordering of the real numbers, together with mathematical induction and upper and lower bounds of sets of real numbers. The following chapters deal with limits of real functions; differentiability and maxima, minima, and convexity; elementary properties of infinite series; and functions defined by power series. Integration is also considered, paying particular attention to the indefinite integral; interval functions and functions of bounded variation; the Riemann-Stieltjes integral; the Riemann integral; and area and curves. The final chapter is devoted to convergence and uniformity. This monograph is intended for mathematics students. Bond and Keane explicate the elements of logical, mathematical argument to elucidate the meaning and importance of mathematical rigor. With definitions of concepts at their disposal, students learn the rules of logical inference, read and understand proofs of theorems, and write their own proofs all while becoming familiar with the grammar of mathematics and its style. In addition, they will develop an appreciation of the different methods of proof (contradiction, induction), the value of a proof, and the beauty of an elegant argument. The authors emphasize that mathematics is an ongoing, vibrant discipline its long, fascinating history continually intersects with territory still uncharted and questions still in need of answers. The authors' extensive background in teaching mathematics shines through in this balanced, explicit, and engaging text, designed as a primer for higher-level mathematics courses. They elegantly demonstrate process and application and recognize the byproducts of both the achievements and the missteps of past thinkers. Chapters 1-5 introduce the fundamentals of abstract mathematics and chapters 6-8 apply the ideas and techniques, placing the earlier material in a real context. Readers' interest is continually piqued by the use of clear explanations, practical examples, discussion and discovery exercises, and historical comments. Tessellations: Mathematics, Art and Recreation aims to present a comprehensive introduction to tessellations (tiling) at a level accessible to non-specialists. Additionally, it covers techniques, tips, and templates to facilitate the creation of mathematical art based on tessellations. Inclusion of special topics like spiral tilings and tessellation metamorphoses allows the reader to explore beautiful and entertaining math and art. The book has a particular focus on 'Escheresque' designs, in which the individual tiles are recognizable real-world motifs. These are extremely popular with students and math hobbyists but are typically very challenging to execute. Techniques demonstrated in the book are aimed at making these designs more achievable. Going beyond planar designs, the book contains numerous nets of polyhedra and templates for applying Escheresque designs to them. Activities and worksheets are spread throughout the book, and examples of real-world tessellations are also provided. Key features: Introduces the mathematics of tessellations, including symmetry Covers polygonal, aperiodic, and non-Euclidean tilings Contains tutorial content on designing and drawing Escheresque tessellations Highlights numerous examples of tessellations in the real world Activities for individuals or classes Filled with templates to aid in creating Escheresque tessellations Treats special topics like tiling rosettes, fractal tessellations, and decoration of tiles

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