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KEY=1 - STEPHANIE PERKINS

CK-12 CALCULUS

CK-12 Foundation CK-12 Foundation's Single Variable Calculus FlexBook introduces high school students to the topics covered in the Calculus AB course. Topics include: Limits, Derivatives, and Integration.

MATHEMATICS AND MULTI-ETHNIC STUDENTS

EXEMPLARY PRACTICES

Taylor & Francis Mathematics and Multi-Ethnic Students provides detailed profiles of teachers across the nation who have implemented effective mathematics instruction for diverse student populations. In this revised edition, Yvelyne Germain-McCarthy expands upon the popular case studies and adds two new chapters to highlight the latest educational research and practices that are reflected in the case studies. A third new chapter introduces the concept of the Life-Long Learning Laboratory where courageous questions on issues such as the impact of race on student learning are discussed. Featuring useful framing tools including the Discussion with Colleagues and Commentary sections, Mathematics and Multi-Ethnic Students translates concrete instances of access and equity into generalized problem-solving methods for promoting ethnic diversity across grade levels. An important resource for pre-service and in-service educators, researchers, administrators, and policy makers, this volume highlights the work of teachers who have gone beyond mere awareness of reform recommendations in mathematics instruction. By uniting the goals of multicultural education with those of the mathematics curriculum, educators will learn to conceptualize and implement best practices for effective, equitable teaching and learning of mathematics for their students.

WORKING WITH ALGEBRA TILES

GRADES 6-12

"A complete resource for using algebra tiles to help students visualize algebra, build and solve equations, and gain comfort and skill with algebraic expressions. Teacher's notes and reproducible activities cover integer operations, linear expressions, quadratic expressions, perimeter, arrays, binomials and more. Each topic progresses through objective prerequisites, getting started and closing the activity." -- (p.4) of cover.

BUSINESS MATH

Cengage Learning BUSINESS MATH, 17E provides comprehensive coverage of personal and business-related mathematics. In addition to reviewing the basic operations of arithmetic, students are prepared to understand and manage their personal finances, as well as grasp the fundamentals of business finances. BUSINESS MATH, 17E prepares students to be smart shoppers, informed taxpayers, and valued employees. Basic math skills are covered in a step-by-step manner, building confidence in users before they try it alone. Spreadsheet applications are available on the Data Activities CD, and a simulation activity begins every chapter. Chapters are organized into short lessons for ease of instruction and include algebra connections, group and class activities, communication skills, and career spotlights. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

ALGEBRA AND TRIGONOMETRY

"The text is suitable for a typical introductory algebra course, and was developed to be used flexibly. While the breadth of topics may go beyond what an instructor would cover, the modular approach and the richness of content ensures that the book meets the needs of a variety of programs."--Page 1.

CORE CONNECTIONS

K-12 EDUCATION: CONCEPTS, METHODOLOGIES, TOOLS, AND APPLICATIONS

CONCEPTS, METHODOLOGIES, TOOLS, AND APPLICATIONS

IGI Global Primary and Secondary education is a formative time for young students. Lessons learned before the rigors of higher education help to inform learners' future successes, and the increasing prevalence of learning tools and technologies can both help and hinder students in their endeavors. K-12 Education: Concepts, Methodologies, Tools, and Applications investigates the latest advances in online and mobile learning, as well as pedagogies and ontologies influenced by current developments in information and communication technologies, enabling teachers, students, and administrators to make the most of their educational experience. This multivolume work presents all stakeholders in K-12 education with the tools necessary to facilitate the next generation of student-teacher interaction.

PEDAGOGICAL APPLICATIONS AND SOCIAL EFFECTS OF MOBILE TECHNOLOGY INTEGRATION

IGI Global With the rapid development of emerging technology tools, the digital nature of learning environments continues to change traditional forms of education. Therefore, knowledge of these changes for incorporation into classroom instruction is necessary. Pedagogical Applications and Social Effects of Mobile Technology Integration analyzes possible solutions over the concerns and issues surrounding mobile technology integration into the classroom. This book is an essential resource for professionals, researchers, and technology leaders interested in providing a direction for the future of classroom technology.

DISCRETE MATHEMATICS

AN OPEN INTRODUCTION

Note: This is the 3rd edition. If you need the 2nd edition for a course you are taking, it can be found as a "other format" on amazon, or by searching its isbn: 1534970746 This gentle introduction to discrete mathematics is written for first and second year math majors, especially those who intend to teach. The text began as a set of lecture notes for the discrete mathematics course at the University of Northern Colorado. This course serves both as an introduction to topics in discrete math and as the "introduction to proof" course for math majors. The course is usually taught with a large amount of student inquiry, and this text is written to help facilitate this. Four main topics are covered: counting, sequences, logic, and graph theory. Along the way proofs are introduced, including proofs by contradiction, proofs by induction, and combinatorial proofs. The book contains over 470 exercises, including 275 with solutions and over 100 with hints. There are also Investigate! activities throughout the text to support active, inquiry based learning. While there are many fine discrete math textbooks available, this text has the following advantages: It is written to be used in an inquiry rich course. It

is written to be used in a course for future math teachers. It is open source, with low cost print editions and free electronic editions. This third edition brings improved exposition, a new section on trees, and a bunch of new and improved exercises. For a complete list of changes, and to view the free electronic version of the text, visit the book's website at discrete.openmathbooks.org

SINGLE VARIABLE CALCULUS

EARLY TRANSCENDENTALS

[Jones & Bartlett Learning](#) Dennis Zill's mathematics texts are renowned for their student-friendly presentation and robust examples and problem sets. The Fourth Edition of *Single Variable Calculus: Early Transcendentals* is no exception. This outstanding revision incorporates all of the exceptional learning tools that have made Zill's texts a resounding success. Appropriate for the first two terms in the college calculus sequence, students are provided with a solid foundation in important mathematical concepts and problem solving skills, while maintaining the level of rigor expected of a Calculus course.

PRE-CALCULUS FOR DUMMIES

[John Wiley & Sons](#) Offers an introduction to the principles of pre-calculus, covering such topics as functions, law of sines and cosines, identities, sequences, series, and binomials.

INTEGRATED MATH, COURSE 2, STUDENT EDITION

[McGraw-Hill Education](#) Includes: Print Student Edition

ADVANCED ALGEBRA

[Springer Science & Business Media](#) *Basic Algebra and Advanced Algebra* systematically develop concepts and tools in algebra that are vital to every mathematician, whether pure or applied, aspiring or established. *Advanced Algebra* includes chapters on modern algebra which treat various topics in commutative and noncommutative algebra and provide introductions to the theory of associative algebras, homological algebras, algebraic number theory, and algebraic geometry. Many examples and hundreds of problems are included, along with hints or complete solutions for most of the problems. Together the two books give the reader a global view of algebra and its role in mathematics as a whole.

MATH 221 FIRST SEMESTER CALCULUS

MATH 221 FIRST Semester Calculus By Sigurd Angenent

MAKING SENSE

TEACHING AND LEARNING MATHEMATICS WITH UNDERSTANDING

[Heinemann](#) This book presents several key principles for teaching mathematics for understanding that you can use to reflect on your own teaching, make more informed decisions, and develop more effective systems of instruction.

SINGLE VARIABLE CALCULUS, VOLUME 2

[Cengage Learning](#) James Stewart's *CALCULUS* texts are widely renowned for their mathematical precision and accuracy, clarity of exposition, and outstanding examples and problem sets. Millions of students worldwide have explored calculus through Stewart's trademark style, while instructors have turned to his approach time and time again. In the Seventh Edition of *SINGLE VARIABLE CALCULUS*, Stewart continues to set the standard for the course while adding carefully revised content. The patient explanations, superb exercises, focus on problem solving, and carefully graded problem sets that have made Stewart's texts best-sellers continue to provide a strong foundation for the Seventh Edition. From the most unprepared student to the most mathematically gifted, Stewart's writing and presentation serve to enhance understanding and build confidence. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

HOW PEOPLE LEARN

BRAIN, MIND, EXPERIENCE, AND SCHOOL: EXPANDED EDITION

[National Academies Press](#) First released in the Spring of 1999, *How People Learn* has been expanded to show how the theories and insights from the original book can translate into actions and practice, now making a real connection between classroom activities and learning behavior. This edition includes far-reaching suggestions for research that could increase the impact that classroom teaching has on actual learning. Like the original edition, this book offers exciting new research about the mind and the brain that provides answers to a number of compelling questions. When do infants begin to learn? How do experts learn and how is this different from non-experts? What can teachers and schools do-with curricula, classroom settings, and teaching methods--to help children learn most effectively? New evidence from many branches of science has significantly added to our understanding of what it means to know, from the neural processes that occur during learning to the influence of culture on what people see and absorb. *How People Learn* examines these findings and their implications for what we teach, how we teach it, and how we assess what our children learn. The book uses exemplary teaching to illustrate how approaches based on what we now know result in in-depth learning. This new knowledge calls into question concepts and practices firmly entrenched in our current education system. Topics include: How learning actually changes the physical structure of the brain. How existing knowledge affects what people notice and how they learn. What the thought processes of experts tell us about how to teach. The amazing learning potential of infants. The relationship of classroom learning and everyday settings of community and workplace. Learning needs and opportunities for teachers. A realistic look at the role of technology in education.

PREALGEBRA

"Prealgebra is designed to meet scope and sequence requirements for a one-semester prealgebra course. The text introduces the fundamental concepts of algebra while addressing the needs of students with diverse backgrounds and learning styles. Each topic builds upon previously developed material to demonstrate the cohesiveness and structure of mathematics. Prealgebra follows a nontraditional approach in its presentation of content. The beginning, in particular, is presented as a sequence of small steps so that students gain confidence in their ability to succeed in the course. The order of topics was carefully planned to emphasize the logical progression throughout the course and to facilitate a thorough understanding of each concept. As new ideas are presented, they are explicitly related to previous topics."--BC Campus website.

THINKING MATHEMATICALLY

[Pearson College Division](#) 'Thinking Mathematically' seeks to turn this familiar statement into a promise of opportunity and exploration. The examples provided offer both a contextual and procedural base that students can easily build upon.

MINDSET MATHEMATICS

VISUALIZING AND INVESTIGATING BIG IDEAS, GRADE 4

[John Wiley & Sons](#) Engage students in mathematics using growth mindset techniques The most challenging parts of teaching mathematics are engaging students and helping them understand the connections between mathematics concepts. In this volume, you'll find a collection of low floor, high ceiling tasks that will help you do just that, by looking at the big ideas at the first-grade level through visualization, play, and investigation. During their work with tens of thousands of teachers, authors Jo Boaler, Jen Munson, and Cathy Williams heard the same message—that they want to incorporate more brain science into their math instruction, but they need guidance in the techniques that work best to get across the concepts they needed to teach. So the authors designed Mindset Mathematics around the principle of active student engagement, with tasks that reflect the latest brain science on learning. Open, creative, and visual math tasks have been shown to improve student test scores, and more importantly change their relationship with mathematics and start believing in their own potential. The tasks in Mindset Mathematics reflect the lessons from brain science that: There is no such thing as a math person - anyone can learn mathematics to high levels. Mistakes, struggle and challenge are the most important times for brain growth. Speed is unimportant in mathematics. Mathematics is a visual and beautiful subject, and our brains want to think visually about mathematics. With engaging questions, open-ended tasks, and four-color visuals that will help kids get excited about mathematics, Mindset Mathematics is organized around nine big ideas which emphasize the connections within the Common Core State Standards (CCSS) and can be used with any current curriculum.

PRECALCULUS

"Precalculus is intended for college-level precalculus students. Since precalculus courses vary from one institution to the next, we have attempted to meet the needs of as broad an audience as possible, including all of the content that might be covered in any particular course. The result is a comprehensive book that covers more ground than an instructor could likely cover in a typical one- or two-semester course; but instructors should find, almost without fail, that the topics they wish to include in their syllabus are covered in the text. Many chapters of OpenStax College Precalculus are suitable for other freshman and sophomore math courses such as College Algebra and Trigonometry; however, instructors of those courses might need to supplement or adjust the material. OpenStax will also be releasing College Algebra and Algebra and trigonometry titles tailored to the particular scope, sequence, and pedagogy of those courses."--Preface.

COLLEGE ALGEBRA

College Algebra provides a comprehensive exploration of algebraic principles and meets scope and sequence requirements for a typical introductory algebra course. The modular approach and richness of content ensure that the book meets the needs of a variety of courses. College Algebra offers a wealth of examples with detailed, conceptual explanations, building a strong foundation in the material before asking students to apply what they've learned. Coverage and Scope In determining the concepts, skills, and topics to cover, we engaged dozens of highly experienced instructors with a range of student audiences. The resulting scope and sequence proceeds logically while allowing for a significant amount of flexibility in instruction. Chapters 1 and 2 provide both a review and foundation for study of Functions that begins in Chapter 3. The authors recognize that while some institutions may find this material a prerequisite, other institutions have told us that they have a cohort that need the prerequisite skills built into the course. Chapter 1: Prerequisites Chapter 2: Equations and Inequalities Chapters 3-6: The Algebraic Functions Chapter 3: Functions Chapter 4: Linear Functions Chapter 5: Polynomial and Rational Functions Chapter 6: Exponential and Logarithm Functions Chapters 7-9: Further Study in College Algebra Chapter 7: Systems of Equations and Inequalities Chapter 8: Analytic Geometry Chapter 9: Sequences, Probability and Counting Theory

SUBTRACTING FRACTIONS

Remedia Publications

GEOMETRY TO GO

A MATHEMATICS HANDBOOK

[Great Source Education Group Incorporated](#) Covers logic and proof, basic elements of geometry, polygons, measurements, similarity, congruence, transformations, circles, solids, problem solving and non-Euclidean geometry. Also includes an almanac with math prefixes and suffixes, study tips, guidelines for using geometry software, a graphing calculator, test-taking strategies, and tables.

COMPETITION MATH FOR MIDDLE SCHOOL

INTRODUCTION TO PROGRAMMING USING JAVA

Orange Grove Text Plus

BEGINNING AND INTERMEDIATE ALGEBRA

[Createspace Independent Publishing Platform](#) Get Better Results with high quality content, exercise sets, and step-by-step pedagogy! Tyler Wallace continues to offer an enlightened approach grounded in the fundamentals of classroom experience in Beginning and Intermediate Algebra. The text reflects the compassion and insight of its experienced author with features developed to address the specific needs of developmental level students. Throughout the text, the author communicates to students the very points their instructors are likely to make during lecture, and this helps to reinforce the concepts and provide instruction that leads students to mastery and success. The exercises, along with the number of practice problems and group activities available, permit instructors to choose from a wealth of problems, allowing ample opportunity for students to practice what they learn in lecture to hone their skills. In this way, the book perfectly complements any learning platform, whether traditional lecture or distance-learning; its instruction is so reflective of what comes from lecture, that students will feel as comfortable outside of class as they do inside class with their instructor.

GEOMETRY GENIUS

[DK Children](#) An interactive guide to shapes for 5- to 8-year-olds, this bright and bold lift-the-flap activity book helps children understand the properties of 2-D and 3-D shapes. Shapes are an important topic for early learners, and this visually appealing book will make it a lot of fun, too! Amazing Shapes features fun geometric characters, like Fox and Lion, and lift-the-flap activities that help kids relate shapes to everyday life. Characters pose key questions, such as "What's special about a sphere?," "What is an equilateral triangle?," and "How many lines of symmetry does a hexagon have?" Children can then lift the flaps and find the answers. An interactive pop-up will also bring learning to life by encouraging kids to spot different shapes within the scene. Amazing Shapes helps kids identify and describe 2-D and 3-D shapes, compare and contrast features of regular and irregular shapes, discuss the size and orientation of shapes, understand nets, identify and count lines of symmetry, and more! It gets kids thinking about shapes in their world and not just on the pages of a math book. Quiz questions and fun activities are found sprinkled throughout the book, encouraging kids to lift the flaps and find out more. Learning shapes is a highly visual topic, and this book tackles the subject in a visually appealing, fully interactive, and playful way.

PRECALCULUS

Precalculus is adaptable and designed to fit the needs of a variety of precalculus courses. It is a comprehensive text that covers more ground than a typical one- or two-semester college-level precalculus course. The content is organized by clearly-defined learning objectives, and includes worked examples that demonstrate problem-solving approaches in an accessible way. Coverage and Scope Precalculus contains twelve chapters, roughly divided into three groups. Chapters 1-4 discuss various types of functions, providing a foundation for the remainder of the course. Chapter 1: Functions Chapter 2: Linear Functions Chapter 3: Polynomial and Rational Functions Chapter 4: Exponential and Logarithmic Functions Chapters 5-8 focus on Trigonometry. In Precalculus, we approach trigonometry by first introducing angles and the unit circle, as opposed to the right triangle approach more commonly used in College Algebra and Trigonometry courses. Chapter 5: Trigonometric Functions Chapter 6: Periodic Functions Chapter 7: Trigonometric Identities and Equations Chapter 8: Further Applications of Trigonometry Chapters 9-12 present some advanced Precalculus topics that build on topics introduced in chapters 1-8. Most Precalculus syllabi include some of the topics in these chapters, but few include all. Instructors can select material as needed from this group of chapters, since they are not cumulative. Chapter 9: Systems of Equations and Inequalities Chapter 10: Analytic Geometry Chapter 11: Sequences, Probability and Counting Theory Chapter 12: Introduction to Calculus

MATH JOKES 4 MATHY FOLKS

Robert Reed Pub *Math Jokes 4 Mathy Folks* is an absolute gem...---Jim Rubillo Professor Emeritus, Bucks County Community College, Newtown, PA The jokes in this book are well-chosen and cover a wide spectrum, from jokes for kids to jokes for math majors, from corny to thought-provoking---Art Benjamin Professor and Mathemagician, Harvey Mudd College, Claremont, CA This is a book that every math teacher from elementary school through college should have in their classroom library. Who said math can't be funny?---Victoria Miles, Middle Grades Math Teacher, Weymouth, MA Patrick Vennebush has put together the most comprehensive set of mathematical jokes I have ever seen...if you like math and you like jokes---or if you need a joke to liven up an otherwise dull and boring lecture---then you need to buy this book.---Guy Brandenburg, Retired Teacher, Washington, DC Math nerds and punsters rejoice! This is the book you've been waiting for---your perfect source for that one-liner to impress your girlfriend, boyfriend, or 8th-grade math teacher. ---Cathy Seeley, Past President, NCTM; Author of *Faster isn't Smarter*---Messages About Math, Teaching and Learning in the 21st Century I haven't laughed so hard since I discovered that imaginary numbers are just numbers with a not-so-real complex. Enjoy!---Edward B. Burger Professor, Williams College Williamstown, MA When not solving problems, telling jokes, or playing ultimate, G. Patrick Vennebush manages online projects for the National Council of Teachers of Mathematics. He has an M.A. in curriculum and instruction from the University of Maryland. He lives in northern Virginia with his wife Nadine, who faughs at 80% of his jokes; his twin toddlers Alex and Eli, who only appreciate 20% of his humor; and his golden retriever Remy, who has never been very good with percents

MATHLINKS 9

COMPUTERIZED ASSESSMENT BANK CD-ROM

DISCOVERING DISCRETE DYNAMICAL SYSTEMS

American Mathematical Soc. *Discovering Discrete Dynamical Systems* is a mathematics textbook designed for use in a student-led, inquiry-based course for advanced mathematics majors. Fourteen modules each with an opening exploration, a short exposition and related exercises, and a concluding project guide students to self-discovery on topics such as fixed points and their classifications, chaos and fractals, Julia and Mandelbrot sets in the complex plane, and symbolic dynamics. Topics have been carefully chosen as a means for developing student persistence and skill in exploration, conjecture, and generalization while at the same time providing a coherent introduction to the fundamentals of discrete dynamical systems. This book is written for undergraduate students with the prerequisites for a first analysis course, and it can easily be used by any faculty member in a mathematics department, regardless of area of expertise. Each module starts with an exploration in which the students are asked an open-ended question. This allows the students to make discoveries which lead them to formulate the questions that will be addressed in the exposition and exercises of the module. The exposition is brief and has been written with the intent that a student who has taken, or is ready to take, a course in analysis can read the material independently. The exposition concludes with exercises which have been designed to both illustrate and explore in more depth the ideas covered in the exposition. Each module concludes with a project in which students bring the ideas from the module to bear on a more challenging or in-depth problem. A section entitled "To the Instructor" includes suggestions on how to structure a course in order to realize the inquiry-based intent of the book. The book has also been used successfully as the basis for an independent study course and as a supplementary text for an analysis course with traditional content.

PROBABILITY & STATISTICS FOR ENGINEERS & SCIENTISTS

MYSTATLAB UPDATE

Pearson NOTE: This edition features the same content as the traditional text in a convenient, three-hole-punched, loose-leaf version. Books a la Carte also offer a great value-this format costs significantly less than a new textbook. Before purchasing, check with your instructor or review your course syllabus to ensure that you select the correct ISBN. Several versions of Pearson's MyLab & Mastering products exist for each title, including customized versions for individual schools, and registrations are not transferable. In addition, you may need a CourseID, provided by your instructor, to register for and use Pearson's MyLab & Mastering products. For junior/senior undergraduates taking probability and statistics as applied to engineering, science, or computer science. This classic text provides a rigorous introduction to basic probability theory and statistical inference, with a unique balance between theory and methodology. Interesting, relevant applications use real data from actual studies, showing how the concepts and methods can be used to solve problems in the field. This revision focuses on improved clarity and deeper understanding. This latest edition is also available in as an enhanced Pearson eText. This exciting new version features an embedded version of StatCrunch, allowing students to analyze data sets while reading the book. Also available with MyStatLab MyStatLab(tm) 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; MyLab(tm) & Mastering(tm) does not come packaged with this content. Students, if interested in purchasing this title with MyLab & Mastering, ask your instructor for the correct package ISBN and Course ID. Instructors, contact your Pearson representative for more information.

THE WORLD FROM BEGINNINGS TO 4000 BCE

Oxford University Press *To be human is to be curious. And one of the things we are most curious about is how we came to be who we are--how we evolved over millions of years to become creatures capable of inquiring into our own evolution. In this lively and readable introduction, renowned anthropologist Ian Tattersall thoroughly examines both fossil and archaeological records to trace human evolution from the earliest beginnings of our zoological family, Hominidae, through the appearance of Homo sapiens to the Agricultural Revolution. He begins with an accessible overview of evolutionary theory and then explores the major turning points in human evolution: the emergence of the genus Homo, the advantages of bipedalism, the birth of the big brain and symbolic thinking, Paleolithic and Neolithic tool making, and finally the enormously consequential shift from hunter-gatherer to agricultural societies 10,000 years ago. Focusing particularly on the pattern of events and innovations in human biological and cultural evolution, Tattersall offers illuminating commentary on a wide range of topics, including the earliest known artistic expressions, ancient burial rites, the beginnings of language, the likely causes of Neanderthal extinction, the relationship between agriculture and Christianity, and the still unsolved mysteries of human consciousness. Complemented by a wealth of illustrations and written with the grace and accessibility for which Tattersall is widely admire, *The World from Beginnings to 4000 BCE* invites us to take a closer look at the strange and distant beings who, over the course of millions of years, would become us.*

APEX CALCULUS VERSION 3.0

SOLUTIONS MANUAL TO ACCOMPANY INTRODUCTION TO ABSTRACT ALGEBRA, 4E, SOLUTIONS MANUAL

John Wiley & Sons An indispensable companion to the book hailed an "expository masterpiece of the highest didactic value" by Zentralblatt MATH This solutions manual helps readers test and reinforce the understanding of the principles and real-world applications of abstract algebra gained from their reading of the critically acclaimed *Introduction to Abstract Algebra*. Ideal for students, as well as engineers, computer scientists, and applied mathematicians interested in the subject, it provides a wealth of concrete examples of induction, number theory, integers modulo n , and permutations. Worked examples and real-world problems help ensure a complete understanding of the subject, regardless of a reader's background in mathematics.

JOURNEY THROUGH GENIUS

THE GREAT THEOREMS OF MATHEMATICS

Penguin Books Like masterpieces of art, music, and literature, great mathematical theorems are creative milestones, works of genius destined to last forever. Now William Dunham gives them the attention they deserve. Dunham places each theorem within its historical context and explores the very human and often turbulent life of the creator — from Archimedes, the absentminded theoretician whose absorption in his work often precluded eating or bathing, to Gerolamo Cardano, the sixteenth-century mathematician whose accomplishments flourished despite a bizarre array of misadventures, to the paranoid genius of modern times, Georg Cantor. He also provides step-by-step proofs for the theorems, each easily accessible to readers with no more than a knowledge of high school mathematics. A rare combination of the historical, biographical, and mathematical, *Journey Through Genius* is a fascinating introduction to a neglected field of human creativity. "It is mathematics presented as a series of works of art; a fascinating lingering over individual examples of ingenuity and insight. It is mathematics by lightning flash." —Isaac Asimov

FUNDAMENTALS OF MATHEMATICS

ACTIVE CALCULUS 2018

SINGLE VARIABLE

[Createspace Independent Publishing Platform Active Calculus - single variable](#) is a free, open-source calculus text that is designed to support an active learning approach in the standard first two semesters of calculus, including approximately 200 activities and 500 exercises. In the HTML version, more than 250 of the exercises are available as interactive WeBWork exercises; students will love that the online version even looks great on a smart phone. Each section of Active Calculus has at least 4 in-class activities to engage students in active learning. Normally, each section has a brief introduction together with a preview activity, followed by a mix of exposition and several more activities. Each section concludes with a short summary and exercises; the non-WeBWork exercises are typically involved and challenging. More information on the goals and structure of the text can be found in the preface.

MATH WITH BAD DRAWINGS

ILLUMINATING THE IDEAS THAT SHAPE OUR REALITY

[Black Dog & Leventhal](#) 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 crises 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-estranged and math-enamored alike.