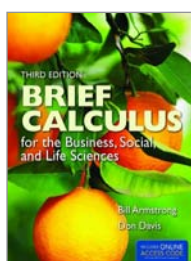


MATHEMATICS

2018 CATALOGUE



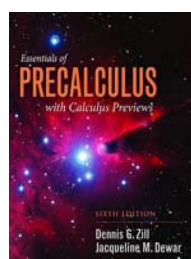
Brief Calculus for the Business, Social, and Life Sciences, 3/e

Bill Armstrong & Don Davis

Brief Calculus for the Business, Social, and Life Sciences presents mathematics in a clear and accessible language. Engaging, real-world examples and real data applications make calculus relevant, and the easy-to-read conversational style of the text evokes the one-on-one communication of a personalized tutorial session without sacrificing depth of coverage or intellectual rigor. The revised and updated *Third Edition* of this popular text includes a new, four-step problem-solving method that allows students to independently find solutions to a broad spectrum of problem sets.

Contents: Functions, Modeling and Average Rate of Change • Limits and Derivatives • Differentiation Techniques, the Differential, and Marginal Analysis • Exponential and Logarithmic Functions • Applications of the Derivative • Integration • Applications of the Integral • Calculus of Several Variables

ISBN: 9781449695163 • HB • 834pp • 2014 • \$93.50



Essentials of Precalculus with Calculus Previews, 6/e

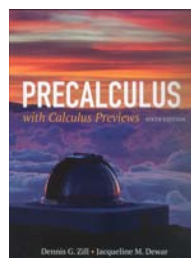
Dennis G. Zill & Jacqueline M. Dewar

The *Sixth Edition* of this best-selling text presents the fundamental mathematics used in a typical calculus sequence in a focused and readable format. It helps students master the important concepts they will need to move on to college level calculus (i.e. functions, logarithms and trigonometry). This text also includes a valuable collection of student and instructor resources, making it a complete teaching and learning package.

Key Features: Expanded discussion of applications of right triangles, including the addition of new problems designed to pique student interest • The discussion of the Laws of Sines and the Law of Cosines are now separated into two sections to facilitate and increase student comprehension • Increased emphasis on solving equations involving exponential and logarithmic functions

Contents: Inequalities, Equations, and Graphs • Functions • Polynomial and Rational Functions • Trigonometric Functions • Exponential and Logarithmic Functions • Conic Sections

ISBN: 9781284056327 • HB • 500pp • 2016 • \$70.00



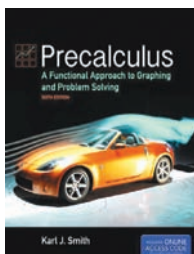
Precalculus with Calculus Previews, 6/e

Dennis G. Zill & Jacqueline M. Dewar

Precalculus with Calculus Previews continues to include all the outstanding features and learning tools found in the original text while incorporating additional topics of coverage that some courses may require. With a continued effort to keep the text complete, yet concise, the authors have expanded the number of chapters making the text a clear choice for many mainstream courses. Additional material includes rotation of conics in the rectangular coordinate system, sequences and series, mathematical induction, the Binomial Theorem, systems of equations, partial fractions, systems of inequalities, a brief introduction to counting and probability, and a full discussion of complex numbers.

Contents: Inequalities, Equations, and Graphs • Functions • Polynomial and Rational Functions • Trigonometric Functions • Triangle Trigonometry • Exponential and Logarithmic Functions • Conic Sections • Polar Coordinates • Systems of Equations and Inequalities • Sequences and Series • Appendix A: Complex Numbers • Appendix B: Additional Tests for Zeroes of a Polynomial Function • Appendix C: Formulas From Geometry • Answers to Selected Odd-Numbered Problems

ISBN: 9781284077261 • HB • 664pp • 2017 • \$98.50



Precalculus, 6/e

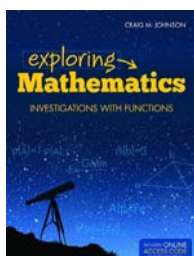
A Functional Approach to Graphing and Problem Solving

Karl J. Smith

Precalculus: A Functional Approach to Graphing and Problem Solving prepares students for the concepts and applications they will encounter in future calculus courses. This text provides sound development of the important mathematical underpinnings of calculus, stimulating problems and exercises.

Contents: Algebraic and Geometrical Foundations • Functions with Problem Solving • Polynomial Functions • Additional Functions • Trigonometric Functions • Trigonometric Equations and Identities • Analytic Geometry • Sequences, Systems, and Matrices • Vectors and Solid Analytic Geometry

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Exploring Mathematics

Investigations with Functions

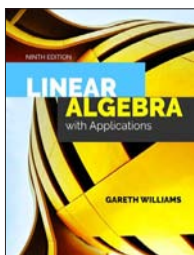
Craig M. Johnson

This unique ten-chapter text covers modern applications of mathematics in the liberal arts and situates the discipline within its rich and varied history.

Exploring Mathematics draws on examples from the humanities, including how math is used in music and astronomy, and features perforated pages for easy study and review. The student-friendly writing style and informal approach demystifies the subject matter and offers an engaging and informative overview.

Contents: The Concept of Function • Functions of Personal Finance • Logic and Computer Science • Astronomy and the Methods of Science • Graph Theory • Social Choice and Voting Methods • Probability • Statistics • Mathematics in Music and Cryptology • Modeling • Appendices

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Linear Algebra with Applications, 9/e

Gareth Williams

Linear Algebra with Applications, Ninth Edition is designed for the introductory course in linear algebra for students within engineering, mathematics, business management, and physics. Updated to increase clarity and improve student learning, the author provides a flexible blend of theory and engaging applications.

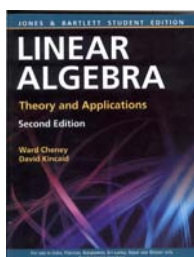
The material in *Linear Algebra with Applications, Ninth Edition* is arranged into three parts that contain core and optional sections:

Part 1 introduces the basics, discussing systems of linear equations, vectors in R^n matrices, linear transformations, determinants, eigenvalues, and eigenspaces.

Part 2 builds on this material to discuss general vector spaces, and includes such topics as the Rank/Nullity Theorem, inner products and coordinate representation.

Part 3 completes the course with important ideas and methods in Numerical Linear Algebra including ill-conditioning, pivoting, LU decomposition and Singular Value Decomposition.

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Linear Algebra, 2/e

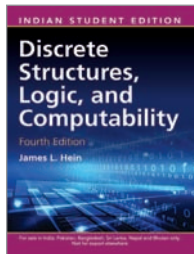
Theory and Applications

Ward Cheney & David Kincaid

Linear Algebra: Theory and Applications, Second Edition, is a multi-faceted introductory textbook, which was motivated by their desire for a single text that meets the various requirements for differing courses within linear algebra.

Contents: Systems of Linear Equations • Solving Systems of Linear Equations • Vectors and Matrices • Kernels, Rank, Homogeneous Equations • Vector Spaces • Euclidean Vector Spaces • Lines, Planes, and Hyperplanes • Linear Transformations • General Vector Spaces • Matrix Operations • Matrices • Matrix Inverses • Determinants • Determinants: Introduction • Determinants: Properties • Vector Subspaces • Column, Row, and Null Spaces • Bases and Dimension • Coordinate Systems • Eigensystems • Eigenvalues and Eigenvectors • Inner-Product Vector Spaces • Inner-Product Spaces • Orthogonality • Additional Topics • Hermitian Matrices and the Spectral Theorem • Matrix Factorizations and Block Matrices • Iterative Methods for Linear Equations • Appendices

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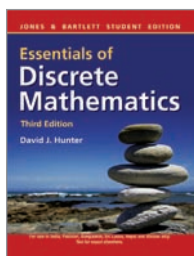
Discrete Structures, Logic, and Computability, 4/e

James L. Hein

The structure of the book supports the spiral method of learning, by first introducing basic information, allowing students to work on the problem, and then revisiting the topic as new information and skills are established. This method, coupled with a student-friendly and simplified writing style, provides an accessible yet comprehensive level of coverage. Written for prospective computer scientists, computer engineers, or applied mathematicians, who wish to learn about the ideas that underlie computer science, this edition contains extensive coverage of logic, setting it apart from other books in the field.

Contents: Elementary Notions and Notations • Facts About Functions • Construction Techniques • Binary Relationships and Inductive Proof • Analysis Tools and Techniques • Elementary Logic • Predicate Logic • Applied Logic • Algebraic Structures and Techniques • Graph Theory • Languages and Automata • Computational Notions

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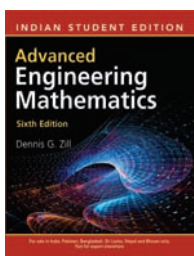
Essentials of Discrete Mathematics, 3/e

David J. Hunter

Essentials of Discrete Mathematics, Third Edition is designed to serve computer science and mathematics majors, as well as students from a wide range of other disciplines. The mathematical material is organized around five types of thinking: logical, relational, recursive, quantitative, and analytical. This presentation results in a coherent outline that steadily builds upon mathematical sophistication. Graphs are introduced early and referred to throughout the text, providing a richer context for examples and applications.

Contents: Logical Thinking • Relational Thinking • Recursive Thinking • Quantitative Thinking • Analytical Thinking • Thinking Through Applications • Hints, Answers, and Solutions to Selected Exercises

ISBN: 9789384323158 • PB • 512pp • 2017 • ₹995.00



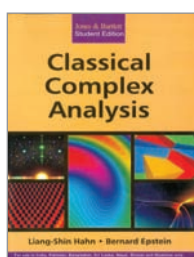
Advanced Engineering Mathematics, 6/e

Dennis G. Zill

Dennis G. Zill's *Advanced Engineering Mathematics* is a compendium of topics that are most often covered in courses in engineering mathematics, and is extremely flexible to meet the unique needs of courses ranging from ordinary differential equations, to vector calculus, to partial differential equations. An accessible writing style and robust pedagogical aids guide students through difficult concepts with thoughtful explanations, clear examples, interesting applications, and contributed project problems.

Contents: Part 1: Ordinary Differential Equations • Introduction to Differential Equations • First-Order Differential Equations • Higher-Order Differential Equations • The Laplace Transform • Series Solutions of Linear Differential Equations • Numerical Solutions of Ordinary Differential Equations • Part 2: Vectors, Matrices, and Vector Calculus • Vectors • Matrices • Vector Calculus • Part 3: Systems of Differential Equations • Systems of Linear First-Order Differential Equations • Systems of Nonlinear Differential Equations • Part 4: Partial Differential Equations • Orthogonal Functions and Fourier Series • Boundary-Value Problems in Rectangular Coordinates • Boundary-Value Problems in Other Coordinate Systems • Integral Transform Method • Numerical Solutions of Partial Differential Equations • Part 5: Complex Analysis • Functions of a Complex Variable • Integration in the Complex Plane • Series and Residues • Conformal Mappings • Appendices

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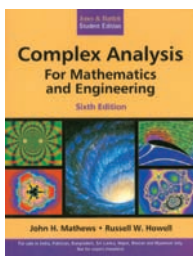
Classical Complex Analysis

Liang-Shin Hahn & Bernard Epstein

Ideal for an introductory course in complex analysis at the advanced undergraduate or graduate level, this text has been developed over decades of teaching with an enthusiastic student reception. The first half of the book focuses in the core material. An early chapter on power series gives the reader concrete examples of analytic functions and a review of calculus. Möbius transformations are presented with emphasis on the geometric aspect and the Cauchy theorem is covered in the classical manner. The remaining chapters provide an elegant and solid overview of special topics such as Entire and Meromorphic Function, Analytic Continuation, Normal families, Conformal Mapping, and Harmonic Functions.

Contents: Complex Numbers • Power Series • Analytic Functions • The Cauchy Theorem • Singularities and Residues • The Maximum Modulus Principle • Entire and Meromorphic Functions • Analytic Continuation • Normal Families • Conformal Mapping • Harmonic Functions • The Picard Theorems

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Complex Analysis for Mathematics and Engineering, 6/e

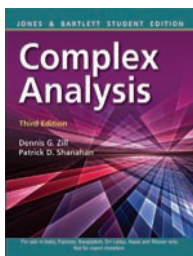
John H. Mathews & Russell W. Howell

Intended for the undergraduate student majoring in mathematics, physics or engineering. The authors strike a balance between the pure and applied aspects of the subject, and present concepts in a clear writing style that is appropriate for students at the junior/senior level.

Key Features: New material on the origin of complex numbers • New exercises help students work through and understand key concepts • The essential details of residues and conformal mappings are included • A chapter on z-transforms illustrates the area of digital signal filtering • Applications include steady state temperatures, fluid flow, and electrostatics • Fourier series are used to solve the Dirichlet problem in the unit disk • Solutions to the odd-numbered problems are included as an appendix

Contents: Complex Numbers • Complex Functions • Analytic and Harmonic Functions • Sequences, Julia and Mandelbrot Sets, and Power Series • Elementary Functions • Complex Integration • Taylor and Laurent Series • Residue Theory • z-Transforms and Applications • Conformal Mapping • Applications of Harmonic Functions • Fourier Series and the Laplace Transform

ISBN: 9789380853413 • PB • 650pp • 2011 • ₹495.00



Complex Analysis, 3/e

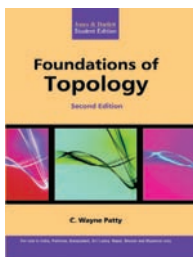
Dennis G. Zill & Patrick D. Shanahan

Complex Analysis is a truly accessible introduction to the fundamental principles and applications of complex analysis. Designed for the undergraduate student with a calculus background but no prior experience with complex analysis, this text discusses the theory of the most relevant mathematical topics in a student-friendly manner. With a clear and straightforward writing style, concepts are introduced through numerous examples, illustrations, and applications. Each section of the text contains an extensive exercise set containing a range of computational, conceptual, and geometric problems. Each chapter contains a separate section devoted exclusively to the applications of complex analysis to science and engineering, providing students with the opportunity to develop a practical and clear understanding of complex analysis.

Key features: Clarity of exposition supported by numerous examples • Extensive exercise sets with a mix of computational and conceptual problems • Applications to science and engineering throughout the text • New and revised problems and exercise sets throughout • Portions of the text and examples have been revised or rewritten to help clarify the topics at hand • The Mathematica syntax from the second edition has been updated to coincide with version 8 of the software.

Contents: Complex Numbers and the Complex Plane • Complex Functions and Mappings • Analytic Functions • Elementary Functions • Integration in the Complex Plane • Series and Residues • Conformal Mappings • Appendices

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Foundations of Topology, 2/e

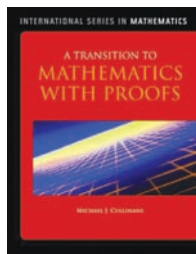
C. Wayne Patty

Written with the mathematically mature student in mind, *Foundations of Topology, Second Edition*, provides a user-friendly, clear, and concise introduction to this fascinating area of mathematics. It is an excellent text for teaching students how to develop the skills necessary for writing clear and precise proofs.

Key features: The text is organized in a flexible fashion, allowing instructors to teach topics in the order they desire for their specific course • A useful background section on Set Theory is available as an appendix • Exercises of varying degrees of difficulty allow students to test themselves on the important mathematical concepts at hand

Contents: Topological Spaces • New Spaces from Old Ones • Connectedness • Compactness • The Separation and Countability Axioms • Special Topics • Metrizable and Paracompactness • The Fundamental Group and Covering Spaces • Applications of Homotopy • Appendices

ISBN: 9789380108117 • PB • 406pp • 2012 • ₹395.00



A Transition to Mathematics with Proofs

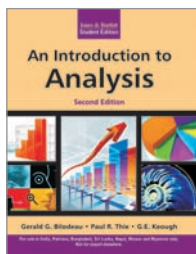
Michael J. Cullinane

A Transition to Mathematics with Proofs emphasizes mathematical rigor and helps students learn how to develop and write mathematical proofs. Throughout early chapters students gradually become aware of the need for rigor, proof, and precision, and mathematical ideas are motivated through examples. It addresses standard topics such as set theory, number system, logic, relations, functions, and induction in at a pace appropriate for a wide range of readers.

Key features: Proof techniques and strategies are thoroughly discussed and the underlying logic behind them is made transparent • Each chapter section begins with a set of guided reading questions intended to help students to identify the most significant points made within the section • Practice problems are embedded within chapters so that students can actively work with a key idea that has just been introduced

Contents: Mathematics and Mathematical Activity • Sets, Numbers, and Axioms • Elementary Logic • Planning and Writing Proofs • Relations and Functions • The Natural Numbers, Induction, and Counting • Further Mathematical Explorations

ISBN: 9781449627782 • HB • 354pp • 2013 • \$194.95



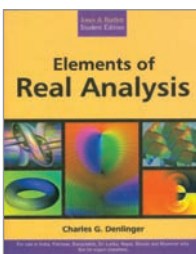
An Introduction to Analysis, 2/e

Gerald G. Bilodeau, Paul R. Thie & G. E. Keough

An Introduction to Analysis presents a concise and sharply focused introduction to the basic concepts of analysis—from the development of real numbers through uniform convergences of a sequence of functions—and includes coverage both of the analysis of functions of more than one variable and of differential equations. This student-friendly text maintains a cautious and deliberate pace, and examples and figures are used extensively to assist the reader in understanding the concepts and then applying them.

Contents: The Real Numbers • Sets • Functions • Algebraic and Order Properties • The Positive Integers • The Least Upper Bound Axiom • Sequences • Sequences and Limits • Limit Theorems • Monotonic Sequences • Sequences Defined Inductively • Subsequences • Cauchy Sequences • Infinite Limits • Functions and Continuity • Limit of a Function • Limit Theorems • Other Limits • Continuity • Intermediate Values, Extreme Values • Uniform Continuity • Functions of Two Variables • The Derivative • Definition of the Derivative • Rules for Differentiation • The Mean Value Theorem • Inverse functions • Differentiability in \mathbb{R}^2 • The Integral • The Definition of the Integral • Properties of the Integral • Existence Theory • The Fundamental Theorem of Calculus • Improper Integrals • Double Integrals • Infinite Series • Basic Theory • Absolute convergence • Power Series • Taylor Series • Sequences and Series of Functions • Uniform Convergence • Consequences of Uniform Convergence • Two Examples • Introduction to Differential Equations • Elementary First Order Differential Equations • Existence and Uniqueness • Power Series Solutions • Appendix • List of Symbols

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Elements of Real Analysis

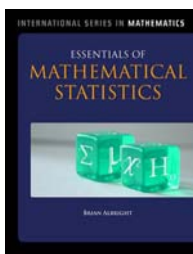
Charles G. Denlinger

Elements of Real Analysis is a student-friendly guide to learning all the important ideas of elementary real analysis, based on the author's many years of experience teaching the subject to typical undergraduate mathematics majors. Students encounter many interesting examples, including "pathological" ones, that motivate the subject and help fix the concepts.

Using this text, students discover that real analysis is completely deducible from the axioms of the real number system. They learn the powerful techniques of limits of sequences as the primary entry to the concepts of analysis, and see the ubiquitous role sequences play in virtually all later topics. They become comfortable with topological ideas, and see how these concepts help unify the subject. They develop a unified understanding of limits, continuity, differentiability, Riemann integrability, and infinite series of numbers and functions.

Contents: The Real Number System • Sequences • Topology of the Real Number System • Limits of Functions • Continuous Functions • Differentiable Functions • The Riemann Integral • Infinite Series of Real Numbers • Sequences and Series of Functions • Appendices

ISBN: 9789380853154 • PB • 468pp • 2015 • ₹1295.00



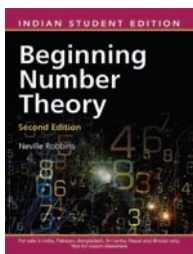
Essentials of Mathematical Statistics

Brian Albright

Written for the one-term introductory probability and statistics course for mid- to upper-level math and science majors, *Essentials of Mathematical Statistics* combines the topics generally found in elementary statistics books with the essentials of the underlying theory. The book begins with an axiomatic treatment of probability followed by chapters on discrete and continuous random variables and their associated distributions. It then introduces basic statistical concepts including summarizing data and interval parameter estimation, stressing the connection between probability and statistics. Final chapters introduce hypothesis testing, regression, and non parametric techniques. All chapters provide a balance between conceptual understanding and theoretical understanding of the topics at hand.

Contents: Random Variables • Joint Distributions • Functions of Independent Random Variables • The Central Limit Theorem • The Gamma and Related Distributions • Approximating the Binomial Distribution • Statistics • What Is Statistics? • Summarizing Data • Maximum Likelihood Estimates • Sampling Distributions • Confidence Intervals for a Proportion • Confidence Intervals for a Mean • Confidence Intervals for a Variance • Confidence Intervals for Differences • Sample Size • Assessing Normality • Hypothesis Testing • Introduction • Testing Claims About a Proportion • Testing Claims About a Mean • Comparing Two Proportions • Comparing Two Variances • Comparing Two Means • Goodness-of-Fit Tests • Test of Independence • One-Way ANOVA • Two-Way ANOVA • Simple Regression • Introduction • Covariance and Correlation • Method of Least Squares • The Simple Linear Model • Sums of Squares and ANOVA • Nonlinear Regression • Multiple Regression • Nonparametric Statistics • Introduction • The Sign Test • The Wilcoxon Signed-Rank Test • The Wilcoxon Rank-Sum Test • The Runs Test for Randomness • Appendix A: Proofs of Selected Theorems • Proof of Theorem • Proof of the Central Limit Theorem • Proof of the Limit Theorem of De Moivre and Laplace • Proof of Theorem • Confidence Intervals for the Difference of Two Means • Coefficients in the Linear Regression Equation • Wilcoxon Signed-Rank Test Distribution • Appendix B: Software Basics • Minitab • R • Excel • TI-/ Calculators • Appendix C: Tables • Appendix D: Answers to Selected Exercises • Index

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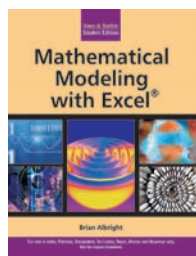
Beginning Number Theory, 2/e

Neville Robbins

Thoroughly revised and updated, the *Second Edition* of Neville Robbin's *Beginning Number Theory* includes all of the major topics covered in a classic Number Theory course and blends in numerous applications and specialized treatments of number theory, including Cryptology, Fibonacci numbers, and Computational Number Theory. *Beginning Number Theory* is appropriate for use in a one-semester, undergraduate number theory course. It is robust with interesting facts, historical notes, and modern applications, yet is clear and manageable for introductory students.

Contents: Introduction • Conjectures, Theorems, and Proofs • Well-Ordering and Induction • Well-Ordering Principle • Sigma Notation and Product Notation • Binomial Coefficients • Greatest Integer Function • Review Exercises • Divisibility • Introduction • Divisibility, Greatest Common Divisor, Euclid's Algorithm • Greatest Common Divisor via Euclid's Algorithm • Least Common Multiple • Representations of Integers • Decimal Representations of Integers • Binary Representations of Integers • Review Exercises • Primes • Introduction • Primes, Prime Counting Function, Prime Number Theorem • Test of Primality by Trial Division • Sieve of Eratosthenes, Canonical Factorization, Fundamental Theorem of Arithmetic • Sieve of Eratosthenes • Determining the Canonical Factorization of a Natural Number • Review Exercises • Congruences • Introduction • Congruences and Equivalence Relations • Equivalence Relations • Linear Congruences • Linear Diophantine Equations and the Chinese Remainder Theorem • Polynomial Congruences • Modular Arithmetic: Fermat's Theorem • Wilson's Theorem and Fermat Numbers • Pythagorean Equation • Review Exercises • Arithmetic Functions • Introduction • Sigma Function, Tau Function, Dirichlet Product • Dirichlet Inverse, Moebius Function, Euler's Function, Euler's Theorem • An Application to Algebra • Review Exercises • Primitive Roots and Indices • Introduction • Primitive Roots: Definition and Properties • Primitive Roots: Existence • Indices • Review Exercises • Quadratic Congruences • Introduction • Quadratic Residues and the Legendre Symbol • Gauss' Lemma and the Law of Quadratic Reciprocity • Solution of Quadratic Congruences • Algorithm for Solving Quadratic Congruences • Quadratic Congruences with Composite Moduli • Jacobi Symbol • Review Exercises • Sums of Squares • Introduction • Sums of Two Squares • Sums of Four Squares • Review Exercises • Continued Fractions • Introduction • Finite Continued Fractions • Infinite Continued Fractions • Approximation by Continued Fractions • Periodic Continued Fractions: I • Periodic Continued Fractions: II • Review Exercises • Nonlinear Diophantine Equations • Introduction • Fermat's Last Theorem • Pell's Equation: $x^2 - Dy^2 = 1$ • Mordell's Equation: $x^3 = y^2 + k$ • Review Exercises • Computational Number Theory • Introduction • Pseudoprimes and Carmichael Numbers • Miller's Test and Strong Pseudoprimes • Factoring: Fermat's Method and the Continued Fraction Method • Trial Division • Fermat's Method • Continued Fraction Method • Quadratic Sieve Method • Pollard $p - 1$ Method • Review Exercises • Cryptology • Introduction • Character Ciphers • Block Ciphers • One-Time Pads: Exponential Ciphers • Public-Key Cryptography • Signatures • Review Exercises

ISBN: 9789384323172 • PB • 352pp • 2017 • ₹695.00



Mathematical Modeling with Excel®

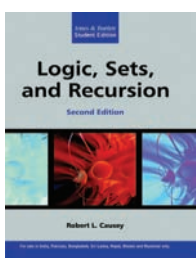
Brian Albright

Mathematical Modeling with Excel® presents the various methods used to build and analyze mathematical models in a format that students can quickly comprehend.

Key features: A user-friendly writing style makes the text appropriate for a wide range of students • Topics are covered in a unique way by beginning each section with a theoretical derivation of a model scenario, then showing step-by-step instructions for implementing and dynamically analyzing the model in Excel • Includes an extensive section on simulation models • The analytical spreadsheets, built according to instruction, allow students to dynamically change the values of parameters and analyze changes in the behavior of the model • Solutions, worksheets and the author-created Excel worksheet "Linear Programming" are available on the text's website

Contents: What is Mathematical Modeling? • Definitions • Purpose • The Process • Assumptions • For Further Reading • References • Proportionality and Geometric Similarity • Introduction • Using Data • Modeling with Proportionality • Fitting Straight Lines Analytically • Geometric Similarity • For Further Reading • References • Empirical Modeling • Introduction • Linearizable Models • Coefficient of Determination • Polynomials • Multiple Regression • Spline Models • For Further Reading • References • Discrete Dynamical Systems • Introduction • Long Term Behavior and Equilibria • Growth of a Bacteria Population • A Linear Predator-Prey Model • A Non-Linear Predator-Prey Model • Differential Equations • Introduction • Euler's Method • Quadratic Population Model • Volterra's Principle • Lancaster Combat Models • Eigenvalues • For Further Reading • References • Simulation modeling • Introduction • Basic examples • The Birthday Problem • Random Number Generators • Modeling Random Variables • Approximating Density Functions • A Theoretical Queuing Model • A Coffee Shop Queuing Model • A Scheduling Model • An Inventory Model • For Further Reading • References • Optimization • Introduction • Linear Programming • The Transportation Problem • The Assignment Problem and Binary Constraints • Solving Linear Programs • The Simplex Method • Sensitivity Analysis • The Gradient Method • For Further Reading • Reference • Spreadsheet Basics • Basic Terminology • Entering Text, Data and Formulas • Creating Charts and Graphs • Array Formulas

ISBN: 9789380108452 • PB • 300pp • 2013 • ₹395.00



Logic, Sets, and Recursion, 2/e

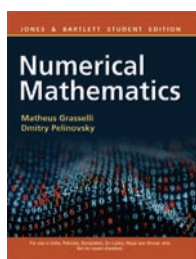
Robert L. Causey

This text paves the way for students preparing to enter more advanced math, computer science, and logic courses, furnishing them with the experience necessary to construct rigorous proofs with ease. It is intended to fill the gap between advanced mathematical logic texts and Discrete Mathematics texts that do not treat logic with the depth required in modern computer science. The *Second Edition* incorporates a wealth of exercise sets, allowing students to test themselves and review important topics discussed throughout the text.

Key features: This text teaches students how to construct and write informal, yet difficult, mathematical proofs using basic set theory, recursive definitions, and mathematical induction • Formal languages are emphasized along with formal derivations and elementary metatheory. Relations between formal and informal proofs are discussed • Set exercises, which were formerly a supplement, have been moved into the body of the text, enhancing the text's pedagogy

Contents: Introduction • Sentential Calculus • Basic Set Theory • Recursion and Mathematical Induction • Predicate Calculus

ISBN: 9789380108087 • PB • 524pp • 2010 • ₹695.00



Numerical Mathematics

Matheus Grasselli & Dmitry Pelinovsky

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