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Discrete Mathematics and Its Applications - Kenneth H. Rosen 2007

The companion Web site -- To the student -- The foundations : logic, sets, and functions -- The fundamentals : algorithms, the integers, and matrices -- Mathematical reasoning -- Counting -- Advanced counting techniques -- Relations -- Graphs -- Trees -- Boolean algebra -- Modeling computation

Orthogonal Sets and Polar Methods in Linear Algebra - Enrique Castillo

2011-10-14

A unique, applied approach to problem solving in linear algebra Departing from the standard methods of analysis, this unique book presents methodologies and algorithms based on the concept of orthogonality and

demonstrates their application to both standard and novel problems in linear algebra. Covering basic theory of linear systems, linear inequalities, and linear programming, it focuses on elegant, computationally simple solutions to real-world physical, economic, and engineering problems. The authors clearly explain the reasons behind the analysis of different structures and concepts and use numerous illustrative examples to correlate the mathematical models to the reality they represent. Readers are given precise guidelines for:

- * Checking the equivalence of two systems
- * Solving a system in certain selected variables
- * Modifying systems of equations
- * Solving linear systems of inequalities
- * Using the new exterior point method
- * Modifying a linear programming problem

With few prerequisites, but with plenty of figures and tables, end-of-chapter exercises as well as Java and Mathematica programs available from the authors' Web site, this is an invaluable text/reference for mathematicians, engineers, applied scientists, and graduate students in mathematics.

Linear Algebra with Applications - Jeffrey Holt 2016-12-15

Holt's *Linear Algebra with Applications*, Second Edition, blends computational and conceptual topics throughout to prepare students for the rigors of conceptual thinking in an abstract setting. The early treatment of conceptual topics in the context of Euclidean space gives students more time, and a familiar setting, in which to absorb them. This organization

also makes it possible to treat eigenvalues and eigenvectors earlier than in most texts. Abstract vector spaces are introduced later, once students have developed a solid conceptual foundation. Concepts and topics are frequently accompanied by applications to provide context and motivation. Because many students learn by example, *Linear Algebra with Applications* provides a large number of representative examples, over and above those used to introduce topics. The text also has over 2500 exercises, covering computational and conceptual topics over a range of difficulty levels.

Mastering Linear Algebra - Francis Su 2019-03-20

Advanced Engineering Mathematics - Dennis Zill 2011

Accompanying CD-ROM contains ... "a chapter on engineering statistics and probability / by N. Bali, M. Goyal, and C. Watkins."--CD-ROM label.

An Introduction to Linear Algebra for Science and Engineering - Daniel Norman 2011-12-15

Norman/Wolczuk's *An Introduction to Linear Algebra for Science and Engineering* has been widely respected for its unique approach, which helps students understand and apply theory and concepts by combining theory with computations and slowly bringing students to the difficult abstract concepts. This approach includes an early treatment of vector

spaces and complex topics in a simpler, geometric context. An Introduction to Linear Algebra for Science and Engineering promotes advanced thinking and understanding by encouraging students to make connections between previously learned and new concepts and demonstrates the importance of each topic through applications. NEW! MyMathLab is now available for this text. The course features assignable homework exercises plus the complete eBook, in addition to tutorial and assessment tools that make it easy to manage your course online.

Introduction to Modern Algebra and Matrix Theory - O. Schreier

2013-05-13

This unique text provides students with a basic course in both calculus and analytic geometry. It promotes an intuitive approach to calculus and emphasizes algebraic concepts. Minimal prerequisites. Numerous exercises. 1951 edition.

Iterative Methods for Sparse Linear Systems - Yousef Saad 2003-04-01

Mathematics of Computing -- General.

Combinatorial Problems and Exercises - L. Lovász 2014-06-28

The aim of this book is to introduce a range of combinatorial methods for those who want to apply these methods in the solution of practical and theoretical problems. Various tricks and techniques are taught by means of exercises. Hints are given in a separate section and a third section

contains all solutions in detail. A dictionary section gives definitions of the combinatorial notions occurring in the book. Combinatorial Problems and Exercises was first published in 1979. This revised edition has the same basic structure but has been brought up to date with a series of exercises on random walks on graphs and their relations to eigenvalues, expansion properties and electrical resistance. In various chapters the author found lines of thought that have been extended in a natural and significant way in recent years. About 60 new exercises (more counting sub-problems) have been added and several solutions have been simplified.

Advanced Engineering Mathematics, 22e - Dass H.K.

"Advanced Engineering Mathematics" is written for the students of all engineering disciplines. Topics such as Partial Differentiation, Differential Equations, Complex Numbers, Statistics, Probability, Fuzzy Sets and Linear Programming which are an important part of all major universities have been well-explained. Filled with examples and in-text exercises, the book successfully helps the student to practice and retain the understanding of otherwise difficult concepts.

MATH1014 Linear Algebra - David Poole 2011

Precalculus - Sheldon Axler 2017-08-21

Sheldon Axler's Precalculus: A Prelude to Calculus, 3rd Edition focuses

only on topics that students actually need to succeed in calculus. This book is geared towards courses with intermediate algebra prerequisites and it does not assume that students remember any trigonometry. It covers topics such as inverse functions, logarithms, half-life and exponential growth, area, e , the exponential function, the natural logarithm and trigonometry.

Studyguide for Linear Algebra - Cram101 Textbook Reviews 2013-05

Never HIGHLIGHT a Book Again Includes all testable terms, concepts, persons, places, and events. Cram101 Just the FACTS101 studyguides gives all of the outlines, highlights, and quizzes for your textbook with optional online comprehensive practice tests. Only Cram101 is Textbook Specific. Accompanies: 9780872893795. This item is printed on demand.

Linear Algebra: A Modern Introduction - David Poole 2010-05-25

David Poole's innovative book emphasizes vectors and geometric intuition from the start and better prepares students to make the transition from the computational aspects of the course to the theoretical. Designed for a one- or two-semester introductory course and written in simple, mathematical English Poole focuses his approach on benefiting student visualization and connection to the material. He offers concrete examples to engage the student before presenting abstraction, and immediately follows up theoretical discussion with further examples and an array of applications

from a variety of disciplines. Students from a variety of backgrounds and learning styles benefit from Poole's practical approach, which covers vectors and vector geometry early in order to enable students to visualize the mathematics while they are doing matrix operations. With a concrete understanding of vector geometry, students are able to visualize and understand the meaning of the calculations that they will encounter and develop mathematical maturity for thinking abstractly. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Introduction to Linear and Matrix Algebra - Nathaniel Johnston 2021-05-19

This textbook emphasizes the interplay between algebra and geometry to motivate the study of linear algebra. Matrices and linear transformations are presented as two sides of the same coin, with their connection motivating inquiry throughout the book. By focusing on this interface, the author offers a conceptual appreciation of the mathematics that is at the heart of further theory and applications. Those continuing to a second course in linear algebra will appreciate the companion volume *Advanced Linear and Matrix Algebra*. Starting with an introduction to vectors, matrices, and linear transformations, the book focuses on building a geometric intuition of what these tools represent. Linear systems offer a powerful application of the ideas seen so far, and lead onto the

introduction of subspaces, linear independence, bases, and rank.

Investigation then focuses on the algebraic properties of matrices that illuminate the geometry of the linear transformations that they represent.

Determinants, eigenvalues, and eigenvectors all benefit from this geometric viewpoint. Throughout, "Extra Topic" sections augment the core content with a wide range of ideas and applications, from linear

programming, to power iteration and linear recurrence relations. Exercises of all levels accompany each section, including many designed to be

tackled using computer software. Introduction to Linear and Matrix Algebra is ideal for an introductory proof-based linear algebra course. The

engaging color presentation and frequent marginal notes showcase the author's visual approach. Students are assumed to have completed one or

two university-level mathematics courses, though calculus is not an explicit requirement. Instructors will appreciate the ample opportunities to choose

topics that align with the needs of each classroom, and the online homework sets that are available through WeBWork.

Advanced Engineering Mathematics - Dennis G. Zill 2006

Thoroughly Updated, Zill's Advanced Engineering Mathematics, Third Edition is a compendium of many mathematical topics for students planning a career in engineering or the sciences. A key strength of this text is Zill's emphasis on differential equations as mathematical

models, discussing the constructs and pitfalls of each. The third edition is comprehensive, yet flexible, to meet the unique needs of various

course offerings ranging from ordinary differential equations to vector calculus. Numerous new projects contributed by esteemed

mathematicians have been added. Key features of the entire text have been modernized to prepare engineers and scientists with the

mathematical skills required to meet current technological challenges. The new larger trim size and 2-color design make the text a

pleasure to read and learn from. Numerous new engineering and science projects contributed by top mathematicians have been added,

and are tied to key mathematical topics in the text. Divided into five major parts, the text's flexibility allows instructors to customize

the text to fit their needs. The first eight chapters are ideal for a complete short course in ordinary differential equations. The Gram-Schmidt orthogonalization process has been added in Chapter 7 and is

used in subsequent chapters. All figures now have explanatory captions. Supplements

Complete Instructor's Solutions: Includes all solutions to the exercises found in the text. Powerpoint lecture slides and additional instructor's resources are available online.

Student Solutions to Accompany Advanced Engineering Mathematics, Third Edition: This student supplement contains the answers to every third

Problem In The Textbook, Allowing Students To Assess Their Progress
And Review Key Ideas And Concepts Discussed Throughout The Text.
ISBN: 0-7637-4095-0

Introduction To Linear Algebra - Mark J. DeBonis 2022-02-23

Introduction to Linear Algebra: Computation, Application, and Theory is designed for students who have never been exposed to the topics in a linear algebra course. The text is filled with interesting and diverse application sections but is also a theoretical text which aims to train students to do succinct computation in a knowledgeable way. After completing the course with this text, the student will not only know the best and shortest way to do linear algebraic computations but will also know why such computations are both effective and successful. Features:
Includes cutting edge applications in machine learning and data analytics
Suitable as a primary text for undergraduates studying linear algebra
Requires very little in the way of pre-requisites

Groups, Matrices, and Vector Spaces - James B. Carrell 2017-09-02

This unique text provides a geometric approach to group theory and linear algebra, bringing to light the interesting ways in which these subjects interact. Requiring few prerequisites beyond understanding the notion of a proof, the text aims to give students a strong foundation in both geometry and algebra. Starting with preliminaries (relations, elementary

combinatorics, and induction), the book then proceeds to the core topics: the elements of the theory of groups and fields (Lagrange's Theorem, cosets, the complex numbers and the prime fields), matrix theory and matrix groups, determinants, vector spaces, linear mappings, eigentheory and diagonalization, Jordan decomposition and normal form, normal matrices, and quadratic forms. The final two chapters consist of a more intensive look at group theory, emphasizing orbit stabilizer methods, and an introduction to linear algebraic groups, which enriches the notion of a matrix group. Applications involving symmetry groups, determinants, linear coding theory and cryptography are interwoven throughout. Each section ends with ample practice problems assisting the reader to better understand the material. Some of the applications are illustrated in the chapter appendices. The author's unique melding of topics evolved from a two semester course that he taught at the University of British Columbia consisting of an undergraduate honors course on abstract linear algebra and a similar course on the theory of groups. The combined content from both makes this rare text ideal for a year-long course, covering more material than most linear algebra texts. It is also optimal for independent study and as a supplementary text for various professional applications. Advanced undergraduate or graduate students in mathematics, physics, computer science and engineering will find this book both useful and

enjoyable.

Calculus, Early Transcendentals, International Metric Edition - James Stewart 2020-01-17

CALCULUS: EARLY TRANSCENDENTALS, Metric, 9th Edition provides you with the strongest foundation for a STEM future. James Stewart's Calculus, Metric series is the top-seller in the world because of its problem-solving focus, mathematical precision and accuracy, and outstanding examples and problem sets. Selected and mentored by Stewart, coauthors Daniel Clegg and Saleem Watson continue his legacy, and their careful refinements retain Stewart's clarity of exposition and make the 9th Edition an even more usable learning tool. The accompanying WebAssign includes helpful learning support and new resources like Explore It interactive learning modules. Showing that Calculus is both practical and beautiful, the Stewart approach and WebAssign resources enhance understanding and build confidence for millions of students worldwide.

Student Solutions Manual for Poole's Linear Algebra: a Modern Introduction, 4th - David Poole 2014-03-26

Contains detailed worked solutions to all odd-numbered exercises in the text; section and chapter summaries of symbols, definitions, and theorems; and study tips and hints. Complex exercises are explored through a

question-and-answer format designed to deeper understanding.

Challenging and entertaining problems that further explore selected exercises are also included.

A First Course in Differential Equations with Modeling Applications - Dennis G. Zill 2012-03-15

A FIRST COURSE IN DIFFERENTIAL EQUATIONS WITH MODELING APPLICATIONS, 10th Edition strikes a balance between the analytical, qualitative, and quantitative approaches to the study of differential equations. This proven and accessible text speaks to beginning engineering and math students through a wealth of pedagogical aids, including an abundance of examples, explanations, Remarks boxes, definitions, and group projects. Written in a straightforward, readable, and helpful style, this book provides a thorough treatment of boundary-value problems and partial differential equations. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Perverse Sheaves and Applications to Representation Theory - Pramod N. Achar 2021-09-27

Since its inception around 1980, the theory of perverse sheaves has been a vital tool of fundamental importance in geometric representation theory. This book, which aims to make this theory accessible to students and

researchers, is divided into two parts. The first six chapters give a comprehensive account of constructible and perverse sheaves on complex algebraic varieties, including such topics as Artin's vanishing theorem, smooth descent, and the nearby cycles functor. This part of the book also has a chapter on the equivariant derived category, and brief surveys of side topics including étale and \mathbb{Q} -adic sheaves, D-modules, and algebraic stacks. The last four chapters of the book show how to put this machinery to work in the context of selected topics in geometric representation theory: Kazhdan-Lusztig theory; Springer theory; the geometric Satake equivalence; and canonical bases for quantum groups. Recent developments such as the p-canonical basis are also discussed. The book has more than 250 exercises, many of which focus on explicit calculations with concrete examples. It also features a 4-page "Quick Reference" that summarizes the most commonly used facts for computations, similar to a table of integrals in a calculus textbook.

Bundle: Linear Algebra - David Poole 2015-10-28

Linear Algebra: A Modern Introduction - David Poole 2014-03-19

David Poole's innovative LINEAR ALGEBRA: A MODERN INTRODUCTION, 4e emphasizes a vectors approach and better prepares students to make the transition from computational to theoretical

mathematics. Balancing theory and applications, the book is written in a conversational style and combines a traditional presentation with a focus on student-centered learning. Theoretical, computational, and applied topics are presented in a flexible yet integrated way. Stressing geometric understanding before computational techniques, vectors and vector geometry are introduced early to help students visualize concepts and develop mathematical maturity for abstract thinking. Additionally, the book includes ample applications drawn from a variety of disciplines, which reinforce the fact that linear algebra is a valuable tool for modeling real-life problems. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Linear Algebra: a Modern Introduction, Loose-Leaf Version - David Poole
2020-06

2015 Coding Workbook for the Physician's Office - Alice Covell
2015-01-29

Succinct, accurate, and flexible, 2015 CODING WORKBOOK FOR THE PHYSICIAN'S OFFICE is the ideal coding practice tool. Whether you are preparing for a certification exam, the approaching transition to ICD-10-CM, or improving your medical coding abilities, this workbook will help you achieve your goal. Designed to quickly boost coding proficiency, 2015

CODING WORKBOOK FOR THE PHYSICIAN'S OFFICE presents you with certification-style questions, challenging critical-thinking scenarios, and a variety of exercises to keep your skills sharp. Includes CEUs from the AAPC. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Multivariable Calculus - James Stewart 2011-01-01

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 MULTIVARIABLE 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.

A Concrete Introduction to Higher Algebra - Lindsay Childs 2012-12-06

This book is written as an introduction to higher algebra for students with a background of a year of calculus. The book developed out of a set of notes for a sophomore-junior level course at the State University of New York at Albany entitled Classical Algebra. In the 1950s and before, it was customary for the first course in algebra to be a course in the theory of equations, consisting of a study of polynomials over the complex, real, and rational numbers, and, to a lesser extent, linear algebra from the point of view of systems of equations. Abstract algebra, that is, the study of groups, rings, and fields, usually followed such a course. In recent years the theory of equations course has disappeared. Without it, students entering abstract algebra courses tend to lack the experience in the algebraic theory of the basic classical examples of the integers and polynomials necessary for understanding, and more importantly, for appreciating the formalism. To meet this problem, several texts have recently appeared introducing algebra through number theory.

Theory and Problems of Linear Algebra - R. D. Sharma 2010-12-01

Theory and Problems of Linear Algebra has been designed to cater to the need of students opting Linear Algebra as a subject at undergraduate and postgraduate levels in various Indian universities. The book exhaustively covers the subject matter and its ap

Linear Algebra Done Right - Sheldon Axler 1997-07-18

This text for a second course in linear algebra, aimed at math majors and graduates, adopts a novel approach by banishing determinants to the end of the book and focusing on understanding the structure of linear operators on vector spaces. The author has taken unusual care to motivate concepts and to simplify proofs. For example, the book presents - without having defined determinants - a clean proof that every linear operator on a finite-dimensional complex vector space has an eigenvalue. The book starts by discussing vector spaces, linear independence, span, basics, and dimension. Students are introduced to inner-product spaces in the first half of the book and shortly thereafter to the finite-dimensional spectral theorem. A variety of interesting exercises in each chapter helps students understand and manipulate the objects of linear algebra. This second edition features new chapters on diagonal matrices, on linear functionals and adjoints, and on the spectral theorem; some sections, such as those on self-adjoint and normal operators, have been entirely rewritten; and hundreds of minor improvements have been made throughout the text.

Introduction to Linear Algebra - Gilbert Strang 1993

Book Description: Gilbert Strang's textbooks have changed the entire approach to learning linear algebra -- away from abstract vector spaces to specific examples of the four fundamental subspaces: the column space and nullspace of A and A' . Introduction to Linear Algebra, Fourth Edition

includes challenge problems to complement the review problems that have been highly praised in previous editions. The basic course is followed by seven applications: differential equations, engineering, graph theory, statistics, Fourier methods and the FFT, linear programming, and computer graphics. Thousands of teachers in colleges and universities and now high schools are using this book, which truly explains this crucial subject.

Linear Algebra: A Modern Introduction - David Poole 2014-03-19

David Poole's innovative LINEAR ALGEBRA: A MODERN INTRODUCTION, 4e emphasizes a vectors approach and better prepares students to make the transition from computational to theoretical mathematics. Balancing theory and applications, the book is written in a conversational style and combines a traditional presentation with a focus on student-centered learning. Theoretical, computational, and applied topics are presented in a flexible yet integrated way. Stressing geometric understanding before computational techniques, vectors and vector geometry are introduced early to help students visualize concepts and develop mathematical maturity for abstract thinking. Additionally, the book includes ample applications drawn from a variety of disciplines, which reinforce the fact that linear algebra is a valuable tool for modeling real-life problems. Important Notice: Media content referenced within the product

description or the product text may not be available in the ebook version.

Artificial Intelligence - David L. Poole 2017-09-25

Artificial Intelligence presents a practical guide to AI, including agents, machine learning and problem-solving simple and complex domains.

Introduction to Linear Algebra with Applications - Jim DeFranza

2015-01-23

Over the last few decades, linear algebra has become more relevant than ever. Applications have increased not only in quantity but also in diversity, with linear systems being used to solve problems in chemistry, engineering, economics, nutrition, urban planning, and more. DeFranza and Gagliardi introduce students to the topic in a clear, engaging, and easy-to-follow manner. Topics are developed fully before moving on to the next through a series of natural connections. The result is a solid introduction to linear algebra for undergraduates' first course.

Essential Calculus: Early Transcendentals - James Stewart 2012-01-20

This book is for instructors who think that most calculus textbooks are too long. In writing the book, James Stewart asked himself: What is essential for a three-semester calculus course for scientists and engineers?

ESSENTIAL CALCULUS: EARLY TRANSCENDENTALS, Second Edition, offers a concise approach to teaching calculus that focuses on major concepts, and supports those concepts with precise definitions, patient

explanations, and carefully graded problems. The book is only 900 pages--two-thirds the size of Stewart's other calculus texts, and yet it contains almost all of the same topics. The author achieved this relative brevity primarily by condensing the exposition and by putting some of the features on the book's website, www.StewartCalculus.com. Despite the more compact size, the book has a modern flavor, covering technology and incorporating material to promote conceptual understanding, though not as prominently as in Stewart's other books. ESSENTIAL CALCULUS: EARLY TRANSCENDENTALS features the same attention to detail, eye for innovation, and meticulous accuracy that have made Stewart's textbooks the best-selling calculus texts in the world. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Mathematical Thinking - John P. D'Angelo 2018

For one/two-term courses in Transition to Advanced Mathematics or Introduction to Proofs. Also suitable for courses in Analysis or Discrete Math. This title is part of the Pearson Modern Classics series. Pearson Modern Classics are acclaimed titles at a value price. Please visit www.pearsonhighered.com/math-classics-series for a complete list of titles. This text is designed to prepare students thoroughly in the logical thinking skills necessary to understand and communicate fundamental ideas and

proofs in mathematics—skills vital for success throughout the upperclass mathematics curriculum. The text offers both discrete and continuous mathematics, allowing instructors to emphasize one or to present the fundamentals of both. It begins by discussing mathematical language and proof techniques (including induction), applies them to easily-understood questions in elementary number theory and counting, and then develops additional techniques of proof via important topics in discrete and continuous mathematics. The stimulating exercises are acclaimed for their exceptional quality.

Linear Algebra - Kuldeep Singh 2013-10

"This book is intended for first- and second-year undergraduates arriving with average mathematics grades ... The strength of the text is in the large number of examples and the step-by-step explanation of each topic as it is introduced. It is compiled in a way that allows distance learning, with explicit solutions to all of the set problems freely available online <http://www.oup.co.uk/companion/singh>" -- From preface.

A Concise Introduction to Pure Mathematics - Martin Liebeck 2018-09-03

Accessible to all students with a sound background in high school mathematics, *A Concise Introduction to Pure Mathematics*, Fourth Edition presents some of the most fundamental and beautiful ideas in pure mathematics. It covers not only standard material but also many

interesting topics not usually encountered at this level, such as the theory of solving cubic equations; Euler's formula for the numbers of corners, edges, and faces of a solid object and the five Platonic solids; the use of prime numbers to encode and decode secret information; the theory of how to compare the sizes of two infinite sets; and the rigorous theory of limits and continuous functions. New to the Fourth Edition Two new chapters that serve as an introduction to abstract algebra via the theory of groups, covering abstract reasoning as well as many examples and applications New material on inequalities, counting methods, the inclusion-exclusion principle, and Euler's phi function Numerous new exercises, with solutions to the odd-numbered ones Through careful explanations and examples, this popular textbook illustrates the power and beauty of basic mathematical concepts in number theory, discrete mathematics, analysis, and abstract algebra. Written in a rigorous yet accessible style, it continues to provide a robust bridge between high school and higher-level mathematics, enabling students to study more advanced courses in abstract algebra and analysis.

Calculus: Early Transcendentals - Jon Rogawski 2018-12-28

We see teaching mathematics as a form of story-telling, both when we present in a classroom and when we write materials for exploration and learning. The goal is to explain to you in a captivating manner, at the right

pace, and in as clear a way as possible, how mathematics works and what it can do for you. We find mathematics to be intriguing and immensely beautiful. We want you to feel that way, too.

Linear Algebra as an Introduction to Abstract Mathematics - Isaiah

Lankham 2015-11-30

This is an introductory textbook designed for undergraduate mathematics majors with an emphasis on abstraction and in particular, the concept of proofs in the setting of linear algebra. Typically such a student would have

taken calculus, though the only prerequisite is suitable mathematical grounding. The purpose of this book is to bridge the gap between the more conceptual and computational oriented undergraduate classes to the more abstract oriented classes. The book begins with systems of linear equations and complex numbers, then relates these to the abstract notion of linear maps on finite-dimensional vector spaces, and covers diagonalization, eigenspaces, determinants, and the Spectral Theorem. Each chapter concludes with both proof-writing and computational exercises.