

Discrete Math Study Guide

A solutions manual designed to accompany the fourth edition of the text, Discrete mathematics with applications, by Susanna S. Epp. It contains complete solutions to every third exercise in the text that is not fully answered in the appendix of the text itself. Additional review material is also provided.

Discrete Structure, Logic, and Computability introduces the beginning computer science student to some of the fundamental ideas and techniques used by computer scientists today, focusing on discrete structures, logic, and computability. The emphasis is on the computational aspects, so that the reader can see how the concepts are actually used. Because of logic's fundamental importance to computer science, the topic is examined extensively in three phases that cover informal logic, the technique of inductive proof, and formal logic and its applications to computer science.

Contains a review of basic algebra, college algebra and analytic geometry, trigonometry, discrete mathematics, and calculus.

This textbook can serve as a comprehensive manual of discrete mathematics and graph theory for non-Computer Science majors; as a reference and study aid for professionals and researchers who have not taken any discrete math course before. It can also be used as a reference book for a course on Discrete Mathematics in Computer Science or Mathematics curricula. The study of discrete mathematics is one of the first courses on curricula in various disciplines such as Computer Science, Mathematics and Engineering education practices. Graphs are key data structures used to represent networks, chemical structures, games etc. and are increasingly used more in various applications such as bioinformatics and the Internet. Graph theory has gone through an unprecedented growth in the last few decades both in terms of theory and implementations; hence it deserves a thorough treatment which is not adequately found in any other contemporary books on discrete mathematics, whereas about 40% of this textbook is devoted to graph theory. The text follows an algorithmic approach for discrete mathematics and graph problems where applicable, to reinforce learning and to show how to implement the concepts in real-world applications.

Discrete Mathematics with Applications

Pearls of Discrete Mathematics

Mathematics with Applications

Schaum's Outline of Theory and Problems of Discrete Mathematics

for New Technology

This practically-focused study guide introduces the fundamentals of discrete mathematics through an extensive set of classroom-tested problems. Each chapter presents a concise introduction to the relevant theory, followed by a detailed account of common challenges and methods for overcoming these. The reader is then encouraged to practice solving such problems for themselves, by tackling a varied selection of questions and assignments of different levels of complexity. This updated second edition now covers the design and analysis of algorithms using Python, and features more than 50 new problems, complete with solutions. Topics and features: provides a substantial collection of problems and examples of varying levels of difficulty, suitable for both laboratory practical training and self-study; offers detailed solutions to each problem, applying commonly-used methods and computational schemes; introduces the fundamentals of mathematical logic, the theory of algorithms, Boolean algebra, graph theory, sets, relations, functions, and combinatorics; presents more advanced material on the design and analysis of algorithms, including Turing machines, asymptotic analysis, and parallel algorithms; includes reference lists of trigonometric and finite summation formulae in an appendix, together with basic rules for differential and integral calculus. This hands-on workbook is an invaluable resource for undergraduate students of computer science, informatics, and electronic engineering. Suitable for use in a one- or two-semester course on discrete mathematics, the text emphasizes the skills required to develop and implement an algorithm in a specific programming language.

Discrete Mathematics for Computer Science: An Example-Based Introduction is intended for a first- or second-year discrete mathematics course for computer science majors. It covers many important mathematical topics essential for future computer science majors, such as algorithms, number representations, logic, set theory, Boolean algebra, functions, combinatorics, algorithmic complexity, graphs, and trees. Features Designed to be especially useful for courses at the community-college level Ideal as a first- or second-year textbook for computer science majors, or as a general introduction to discrete mathematics Written to be accessible to those with a limited mathematics background, and to aid with the transition to abstract thinking Filled with over 200 worked examples, boxed for easy reference, and over 200 practice problems with answers Contains approximately 40 simple algorithms to aid students in becoming proficient with algorithm control structures and pseudocode Includes an appendix on basic circuit design which provides a real-world motivational example for computer science majors by drawing on multiple topics covered in the book to design a circuit that adds two eight-digit binary numbers Jon Pierre Fortney graduated from the University of Pennsylvania in 1996 with a BA in Mathematics and Actuarial Science and a BSE in Chemical Engineering. Prior to returning to graduate school, he worked as both an environmental engineer and as an actuarial analyst. He graduated from Arizona State University in 2008 with a PhD in Mathematics, specializing in Geometric Mechanics. Since 2012, he has worked at Zayed University in Dubai. This is his second mathematics textbook.

These are notes of my Discrete Mathematics lectures held for students in Communication and Electric Engineering at Sapienza, the University of Roma. Roughly, the course is composed of the following parts: 1. Elements of Number Theory 2. elements of modern algebra 3. elements of combinatorics 4. elements of graph theory My objective was to illustrate several topics in dierent areas of modern mathematics into which Discrete Mathematics can be subdivided. Moreover, I wanted to give an "experimental" approach to the study of the material by repeatedly inviting students, whenever possible or feasible, to use a computer and a computer algebra system to carry out experimentation. Given the great variety of possible topics it was ducial to select a single book containing everything I wanted to show and only that. I therefore consulted many dierent sources that are acknowledged in the bibliography and I recommend them for further study. Some sections written in smaller fonts can be skipped or skimmed in a rst reading as they do not properly belong to a traditional course on Discrete Mathematics, but that I felt important enough to include here with the aim of stimulating the curiosity of inquiring young minds.

This clearly written textbook presents an accessible introduction to discrete mathematics for computer science students, offering the reader an enjoyable and stimulating path to improve their programming competence. The text empowers students to think critically, to be effective problem solvers, to integrate theory and practice, and to recognize the importance of abstraction. Its motivational and interactive style provokes a conversation with the reader through a questioning commentary, and supplies detailed walkthroughs of several algorithms. This updated and enhanced new edition also includes new material on directed graphs, and on drawing and coloring graphs, in addition to more than 100 new exercises (with solutions to selected exercises). Topics and features: assumes no prior mathematical knowledge, and discusses concepts in programming as and when they are needed; designed for both classroom use and self-study, presenting modular and self-contained chapters that follow ACM curriculum recommendations; describes mathematical processes in an algorithmic manner, often supported by a walkthrough demonstrating how the algorithm performs the desired task; includes an extensive set of exercises throughout the text, together with numerous examples, and shaded boxes highlighting key concepts; selects examples that demonstrate a practical use for the concept in question. Students embarking on the start of their studies of computer science will find this book to be an easy-to-understand and fun-to-read primer, ideal for use in a mathematics course taken concurrently with their first programming course.

Study Guide, Discrete Mathematics, Second Edition

Praxis II Mathematics Content Knowledge 5161 Study Guide

A Companion Manual Using Python

Foundations of Discrete Mathematics

Praxis Math Content Knowledge: 5161 Study Guide and Practice Test Questions for Secondary Prep [3rd Edition]

Discrete Mathematics with Ducks, Second Edition is a gentle introduction for students who find the proofs and abstractions of mathematics challenging. At the same time, it provides stimulating material that instructors can use for more advanced students. The first edition was widely well received, with its whimsical writing style and numerous exercises and materials that engaged students at all levels. The new, expanded edition continues to facilitate effective and active learning. It is designed to help students learn about discrete mathematics through problem-based activities. These are created to inspire students to understand mathematics by actively practicing and doing, which helps students better retain what they've learned. As such, each chapter contains a mixture of discovery-based activities, projects, expository text, in-class exercises, and homework problems. The author's lively and friendly writing style is appealing to both instructors and students alike and encourages readers to learn. The book's light-hearted approach to the subject is a guiding principle and helps students learn mathematical abstraction. Features: The book's 'Try This!' sections encourage students to construct components of discussed concepts, theorems, and proofs Provided sets of discovery problems and illustrative examples reinforce learning Bonus sections can be used by instructors as part of their regular curriculum, for projects, or for further study What sort of mathematics do I need for computer science? In response to this frequently asked question, a pair of professors at the University of California at San Diego created this text. Its sources are two of the university's most basic courses: Discrete Mathematics, and Mathematics for Algorithm and System Analysis. Intended for use by sophomores in the first of a two-quarter sequence, the text assumes some familiarity with calculus. Topics include Boolean functions and computer arithmetic; logic; number theory and cryptography; sets and functions; equivalence and order; and induction, sequences, and series. Multiple choice questions for review appear throughout the text. Original 2005 edition. Notation Index. Subject Index.

This textbook provides an engaging and motivational introduction to traditional topics in discrete mathematics, in a manner specifically designed to appeal to computer science students. The text empowers students to think critically, to be effective problem solvers, to integrate theory and practice, and to recognize the importance of abstraction. Clearly structured and interactive in nature, the book presents detailed walkthroughs of several algorithms, stimulating a conversation with the reader through informal commentary and provocative questions. Features: no university-level background in mathematics required; ideally structured for classroom-use and self-study, with modular chapters following ACM curriculum recommendations; describes mathematical processes in an algorithmic manner; contains examples and exercises throughout the text, and highlights the most important concepts in each section; selects examples that demonstrate a practical use for the concept in question.

A Student's Guide to the Study, Practice, and Tools of Modern Mathematics provides an accessible introduction to the world of mathematics. It offers tips on how to study and write mathematics as well as how to use various mathematical tools, from LaTeX and Beamer to Mathematica® and Maple™ to MATLAB® and R. Along with a color insert, the text includes exercises and challenges to stimulate creativity and improve problem solving abilities. The first section of the book covers issues pertaining to studying mathematics. The authors explain how to write mathematical proofs and papers, how to perform mathematical research, and how to give mathematical presentations. The second section focuses on the use of mathematical tools for mathematical typesetting, generating data, finding patterns, and much more. The text describes how to compose a LaTeX file, give a presentation using Beamer, create mathematical diagrams, use computer algebra systems, and display ideas on a web page. The authors cover both popular commercial software programs and free and open source software, such as Linux and R. Showing how to use technology to understand mathematics, this guide supports students on their way to becoming professional mathematicians. For beginning mathematics students, it helps them study for tests and write papers. As time progresses, the book aids them in performing advanced activities, such as computer programming, typesetting, and research.

Notes on Discrete Math

Schaum's Outline of Discrete Mathematics, Fourth Edition

Student Solutions Manual and Study Guide, Discrete Mathematics with Applications

Discrete Structures, Logic, and Computability

Praxis Mathematics Content Knowledge 5161 Study Guide

This powerful problem-solver gives you 2,000 problems in discrete mathematics, fully solved step-by-step! From Schaum's, the originator of the solved-problem guide, and students' favorite with over 30 million study guides sold! This solution-packed timesaver helps you master every type of problem you will face on your tests, from simple questions on set theory to complex Boolean algebra, logic gates, and the use of propositional calculus. Go directly to the answers you need! Discrete Mathematics is so complete it's the perfect tool for graduate or professional exam prep!

In a comprehensive yet easy-to-follow manner, Discrete Mathematics for New Technology follows the progression from the basic mathematical concepts covered by the GCSE in the UK and by high-school algebra in the USA to the more sophisticated mathematical concepts examined in the latter stages of the book. The book punctuates the rigorous treatment of theory with frequent uses of pertinent examples and exercises, enabling readers to achieve a feel for the subject at hand and the nature of mathematical proof, set theory, relations and functions, matrices and systems of linear equations, algebraic structures, Boolean algebras, and a thorough treatise on graph theory. Although aimed primarily at computer science students, the structured development of the mathematics enables this text to be used by undergraduate mathematicians, scientists, and others who require an understanding of discrete mathematics.

Several areas of mathematics find application throughout computer science, and all students of computer science need a practical working understanding of them. These core subjects are centred on logic, sets, recursion, induction, relations and functions. The material is often called discrete mathematics, to distinguish it from the traditional topics of continuous mathematics such as integration and differential equations. The central theme of this book is the connection between these used in many branches of computer science. In applica tions including program specification, datastructures,design and analysis of algorithms, database systems, hardware design, reasoning about the correctness of implementations, and much more: • Computers can help to make the mathematics easier to learn and use, by making mathematical terms executable, making abstract concepts more concrete, and through the use of software tools such as proof checkers. These can serve as a calculator, but instead of just doing arithmetic and trigonometric functions, it will be used to calculate with sets, relations, functions, predicates and inferences. There are also special software tools, for example a proof checker for logical proofs using natural deduction. Offers explanations and step-by-step guidance on solving the kinds of problems students find in exams. This guide features the applications of discrete mathematics to computer science and is useful for independent study or to supplement, reinforce and strengthen work in class.

College Mathematics

A Problem-Solving Primer

A Short Course in Discrete Mathematics

Discrete Mathematics for Computer Science

MITC Mathematics (Secondary) 22

BarCharts' handy 3-panel guide can make even the most complicated probability equations a breeze. Definitions, hints and sample problems are contained within each page, along with full-color illustrations and graphs highlighting specific problems. The "probability" of attaining better grades with this excellent reference tool is very good!

The Student Solutions Manual contains fully worked-out solutions to all of the exercises not completely answered in Appendix B, and is divisible by 3. The Study Guide also includes alternate explanations for some of the concepts and review questions for each chapter enabling students to gain additional practice and succeed in the course.

Study smarter and stay on top of your discrete mathematics course with the bestselling Schaum's Outline—now with the NEW Schaum's app and website! Schaum's Outline of Discrete Mathematics, Fourth Edition is the go-to study guide for more than 115,000 math majors and first- and second-year university students taking basic computer science courses. With an outline format that facilitates quick and easy review, Schaum's Outline of Discrete Mathematics, Fourth Edition helps you understand basic concepts and get the extra practice you need to excel in these courses. Coverage includes set theory, relations, functions and algorithms; logic and propositional calculus; techniques of counting; advanced counting techniques, recursion, probability; graph theory; directed graphs; binary trees; properties of the integers; languages, automata, machines; finite state machines and Turing machines; ordered sets and lattices, and Boolean algebra. Features • NEW to this edition: the new Schaum's app and website! • NEW to this edition: 20 NEW problem-solving videos online • 467 solved problems, and hundreds of additional practice problems • Outline format to provide a concise guide to the standard college course in discrete mathematics • Clear, concise explanations of discrete mathematics concepts • Expanded coverage of logic, the rules of inference and basic types of proofs in mathematical reasoning • Increased emphasis on discrete probability and aspects of probability theory, and greater accessibility to counting techniques. •

Logic chapter emphasizes the IF-THEN and IF-THEN-ELSE sequencing that occurs in computer programming • Computer arithmetic chapter covers binary and hexagon addition and multiplication • Cryptology chapter includes substitution and RSA method • Supports these major texts: Discrete Mathematics and Its Applications (Rosen), and Discrete Mathematics (Epp) • Appropriate for the following courses: Introductory Discrete Mathematics and Discrete Mathematics

This book discusses examples of discrete mathematics in school curricula, including in the areas of graph theory, recursion and discrete dynamical systems, combinatorics, logic, game theory, and the mathematics of fairness. In addition, it describes current discrete mathematics curriculum initiatives in several countries, and presents ongoing research, especially in the areas of combinatorial reasoning and the affective dimension of learning discrete mathematics. Discrete mathematics is the math of our time.' So declared the immediate past president of the National Council of Teachers of Mathematics, John Dossey, in 1991. Nearly 30 years later that statement is still true, although the news has not yet fully reached school mathematics curricula. Nevertheless, much valuable work has been done, and continues to be done. This volume reports on some of that work. It provides a glimpse of the state of the art in learning and teaching discrete mathematics around the world, and it makes the case once again that discrete mathematics is indeed mathematics for our time, even more so today in our digital age, and it should be included in the core curricula of all countries for all students.

The Discrete Math Workbook

An Example-Based Introduction

An Accessible Introduction to the History, Theory, Logic and Applications

Guide to Discrete Mathematics

Prep for Success ACT COMPASS Math Study Guide

This concise, undergraduate-level text focuses on combinatorics, graph theory with applications to some standard network optimization problems, and algorithms. More than 200 exercises, many with complete solutions. 1991 edition.

Containing exercises and materials that engage students at all levels, Discrete Mathematics with Ducks presents a gentle introduction for students who find the proofs and abstractions of mathematics challenging. This classroom-tested text uses discrete mathematics as the context for introducing proofwriting. Facilitating effective and active learning, each chapter contains a mixture of discovery activities, expository text, in-class exercises, and homework problems. Elementary exercises at the end of each exposition sections encourage students to construct fundamental components of the concepts, theorems, and proofs discussed. Sets of discovery problems and illustrative examples reinforce learning. Bonus sections can be used for take-home exams, projects, or further study Instructor Notes sections offer suggestions on how to use the material in each chapter Discrete Mathematics with Ducks offers students a diverse introduction to the field and a solid foundation for further study in discrete mathematics and combinatorics and graph theory are used in both computer science and mathematics

Test Prep Books' Praxis Math Content Knowledge: Praxis 5161 Study Guide and Practice Test Questions for Secondary Prep [3rd Edition] Made by Test Prep Books experts for test takers trying to achieve a great score on the Praxis Math exam. This comprehensive study guide includes: Quick Overview Find out what's inside this guide! Test-Taking Strategies Learn the what the best tips to help overcome your exam! Introduction Get a thorough breakdown of what the test is and what's on it! Number & Quantity, Algebra, Function Statistics, and Discrete Mathematics Practice Questions Practice makes perfect! Detailed Answer Explanations Figure out where you went wrong and how to improve! Studying can be hard. We get it. That's why we created this guide with these great features and benefits: Comprehensive Review: Each section of the test has a comprehensive review created by Test Prep Books that goes into detail to cover all of the content likely to appear on the test. Praxis Math Practice Test Questions: We want to give you the test questions you need to succeed. Test Prep Books practice questions are as close as you can get to the actual test. Answer Explanations: Every single problem is followed by an answer explanation. We know it's frustrating to miss a question and not understand why. The answer explanations will help you learn from your mistakes. That way, you can avoid missing it again in the future. Test-Taking Strategies: A test taker has to understand the material that is being covered and be familiar with the latest math practice strategies. These strategies are necessary to takeers complete the test without making any errors. Test Prep Books has provided the top test-taking tips. Customer Service: We love taking care of our test takers. We make sure that you interact with a real human being when you email your comments or concerns. Anyone planning to take this exam should take advantage of this Test Prep Books study guide. Purchase it today to receive access to: Praxis Math review materials Praxis Math practice test questions Test-taking strategies

This practically-oriented textbook presents an accessible introduction to discrete mathematics through a substantial collection of classroom-tested exercises. Each chapter opens with concise coverage of the theory underlying the topic, reviewing the basic concepts and establishing the terminology, as well as providing the key formulae and instructions on their use. This is then followed by a detailed account of the most common problems in the area, before the reader is invited to practice solving such problems from assignments. Topics and features: provides an extensive set of exercises and examples of varying levels of complexity, suitable for both laboratory practical training and self-study; offers detailed solutions to many problems, applying commonly-used methods and computational schemes; introduces the fundamentals of mathematical logic, the theory of algorithms, Boolean algebra, graph theory, sets, relations, functions, and combinatorics; presents more advanced material on the design and analysis of algorithms, including reference lists of trigonometric and finite summation formulae in an appendix, together with basic rules for differential and integral calculus. This hands-on study guide is designed to address the core needs of undergraduate students training in computer science, informatics, and electronic engineering, emphasizing the skills required to develop and implement an algorithm in a specific programming language.

Discrete Mathematics Using a Computer

Test Prep & Practice Test Questions for the Praxis II Math Exam

Fundamentals of Discrete Math for Computer Science

A Concise Study Companion and Guide

Probability

This introduction to discrete mathematics is aimed at freshmen and sophomores in mathematics and computer science. It begins with a survey of number systems and elementary set theory before moving on to treat data structures, counting, probability, relations and functions, graph theory, matrices, number theory and cryptography. The end of each section contains problem sets with selected solutions, and good examples occur throughout the text.

The first edition of this book sold more than 100,000 copies—and this new edition will show you why! Schaum's Outline of Discrete Mathematics shows you step by step how to solve the kind of problems you're going to find on your exams. And this new edition features all the latest applications of discrete mathematics to computer science! This guide can be used as a supplement, to reinforce and strengthen the work you do with your class text. (It works well with virtually any discrete mathematics textbook.) But it is so comprehensive that it can even be used alone as a text in discrete mathematics or as independent study tool!

This stimulating textbook presents a broad and accessible guide to the fundamentals of discrete mathematics, highlighting how the techniques may be applied to various exciting areas in computing. The text is designed to motivate and inspire the reader, encouraging further study in this important skill. Features: provides an introduction to the building blocks of discrete mathematics, including sets, relations and functions; describes the basics of number theory, the techniques of induction and recursion, and the applications of mathematical sequences, series, permutations, and combinations; presents the essentials of algebra; explains the fundamentals of automata theory, matrices, graph theory, cryptography, coding theory, language theory, and the concepts of computability and decidability; reviews the history of logic, discussing propositional and predicate logic, as well as advanced topics; examines the field of software engineering, describing formal methods; investigates probability and statistics.

This resource for the Michigan Department of Education's math standards exam highlights mathematical processes and number concepts, patterns, algebraic relationships and functions, measurement and geometry, data analysis, statistics, and discrete mathematics. (Study Guides)

Prep Book for the Praxis 2 Math Exam

Schaum's Outline of Discrete Mathematics

A Companion Manual for Practical Study

2000 Solved Problems in Discrete Mathematics

Discrete Mathematics with Ducks

Includes 1 diagnostic exam plus 2 additional practice tests. Identify your weak areas to ensure your success.The COMPASS math exam is a computer adaptive test that can be very challenging. Topics range from basic algebra and arithmetic to trigonometry and discrete math. Exam content can vary as each post-secondary institution customizes the test to suit their placement testing needs. But you can avoid having to take remedial classes, saving time and money, by doing well on the exam so it is important to equip yourself with the right study guide.The Prep For Success COMPASS Math Study Guide explains every concept in detail so whether you're just out of high school or returning to college after a lengthy hiatus, our guide is the right fit. Every chapter is filled with explained examples followed by practice exercise at the end. So that you can study only the sections used on the COMPASS at your institution, our math study guide is divided into 6 sections as follows: - Section 1 - Pre-Algebra - Section 2 - Algebra - Section 3 - College Algebra, Discrete Math & Matrices - Section 4 - Geometry - Section 5 - Trigonometry - Section 6 - Practice TestsAt the end of every section, you'll see your skills with review questions to ensure you have mastered the skills learned before moving on to another section. Two comprehensive practice exams at the end of the book help you prepare for the exam by identifying any lingering weak areas. For most students, math doesn't end with the practice test so rather than simply providing a series of typical exam questions, our goal is to teach you the concepts so that you are prepared for your other college math courses and attain the skills you need to succeed in your college career. Education is the key to success and our Prep For Success: COMPASS Math Study Guide is the right choice to ensure that success!

Methods Used to Solve Discrete Math ProblemsInteresting examples highlight the interdisciplinary nature of this areaPears of Discrete Mathematics presents methods for solving counting problems and other types of problems that involve discrete structures. Through intriguing examples, problems, theorems, and proofs, the book illustrates the relation

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

This Book Is Not Meant To Be Taken In Discrete Mathematics: It Is A Foundation For Another Book Applied Discrete Structures By The Same Author. The Ultimate Goal Of The Two Books Are To Make A Strong Case For The Inclusion Of Discrete Mathematics In The Undergraduate Curricula Of Mathematics By Creating A Sequence Of Courses In Discrete Mathematics Parallel To The Traditional Sequence Of Calculus-Based Courses. The Present Book Covers The Foundations Of Discrete Mathematics In Seven Chapters. It Lays A Heavy Emphasis On Motivation And Attempts Clarity Without Sacrificing Rigour. A List Of Typical Problems Is Given In The First Chapter. These Problems Are Used Throughout The Book To Motivate Various Concepts. A Review Of Logic Is Included To Get The Reader Into A Proper Frame Of Mind. The Basic Counting Techniques Are Covered In Chapters 2 And 7. Those In Chapter 2 Are Elementary, But They Are Intentionally Covered In A Formal Manner So As To Acquaint The Reader With The Traditional Definition-Theorem-Proof Pattern Of Mathematics. Chapters 3 Introduces Abstraction And Shows How The Focal Point Of Today's Mathematics Is Not Numbers But Sets Carrying Suitable Structures. Chapter 4 Deals With Boolean Algebras And Their Applications. Chapters 5 And 6 Deal With More Traditional Topics In Algebra. Viz., Groups, Rings, Fields, Vector Spaces And Matrices. The Presentation Is Elementary And Presupposes No Mathematical Maturity On The Part Of The Reader. Instead, Comments Are Inserted Liberally To Increase His Maturity. Each Chapter Has Four Sections. Each Section Is Followed By Exercises (Of Various Degrees Of Difficulty) And By Notes And To Literature. Answers To The Exercises Are Provided At The End Of The Book.

Teaching and Learning Discrete Mathematics Worldwide: Curriculum and Research

A Student's Guide to the Study, Practice, and Tools of Modern Mathematics

Introductory Discrete Mathematics

An Open Introduction

Discrete Mathematics

Computer science abounds with applications of discrete mathematics, yet s- dents of computer science often study discrete mathematics in the context of purely mathematical applications. They have to ?gure out for themselves how to apply the ideas of discrete mathematics to computing problems. It is not easy. Most students fail to experience broad success in this enterprise, which is not surprising, since many of the most important advances in science and engineeringhavebeen, precisely, applicationsofmathematicspeci?cscience and engineering problems. Tobesure,mostdiscretemathtextbookscorporatesomeaspectsofapplying discrete math to computing, but it usually takes the form of asking students to write programs to compute the number of three-ball combinations there are in a set of ten balls or, at best, to implement a graph algorithm. Few texts ask students to use mathematical logic to analyze properties of digital circuits or computer programs or to apply the set theoretic model of functions to understand higher-order operations. A major aim of this text is to integrate, tightly, the study of discrete mathematics with the study of central problems of computer science.

Susanna Epp's DISCRETE MATHEMATICS WITH APPLICATIONS, FOURTH EDITION provides a clear introduction to discrete mathematics. Renowned for her lucid, accessible prose, Epp explains complex, abstract concepts with clarity and precision. This book presents not only the major themes of discrete mathematics, but also the reasoning that underlies mathematical thought. Students develop the ability to think abstractly as they study the ideas of logic and proof. While learning about such concepts as logic circuits and computer addition, algorithm analysis, recursive thinking, computability, automata, cryptography, and combinatorics, students discover that the ideas of discrete mathematics underlie and are essential to the science and technology of the computer age. Overall, Epp's emphasis on reasoning provides students with a strong foundation for computer science and upper-level mathematics courses. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Praxis Mathematics Content Knowledge 5161 Study Guide: Test Prep & Practice Test Questions for the Praxis II Math Exam Developed for test takers trying to achieve a passing score on the Praxis II Mathematics Content Knowledge test, this comprehensive study guide includes: • Quick Overview • Test-Taking Strategies • Introduction to the Praxis II Mathematics Test • Number & Quantity, Algebra, Functions, and Calculus • Geometry, Probability & Statistics, Algebra, Functions, and Calculus • Geometry, Probability & Statistics, and Discrete Mathematics • Practice Questions • Detailed Answer Explanations Each section of the test has a comprehensive review that goes into detail to cover all of the content likely to appear on the Praxis II Mathematics Content Knowledge Test. The practice test questions are each followed by detailed answer explanations. If you miss a question, it's important that you are able to understand the nature of your mistake and how to avoid making it again in the future. The answer explanations will help you to learn from your mistakes and overcome them. Understanding the latest test-taking strategies is essential to preparing you for what you will expect on the exam. A test taker has to not only understand the material that is being covered on the test, but also must be familiar with the strategies that are necessary to properly utilize the time provided and get through the test without making any avoidable errors. Anyone planning to take the Praxis II Mathematics Content Knowledge test should take advantage of the review material, practice test questions, and test-taking strategies contained in this study guide.

Susanna Epp's DISCRETE MATHEMATICS: AN INTRODUCTION TO MATHEMATICAL REASONING, provides the same clear introduction to discrete mathematics and mathematical reasoning as her highly acclaimed DISCRETE MATHEMATICS WITH APPLICATIONS, but in a compact form that focuses on core topics and omits certain applications usually taught in other courses. The book is appropriate for use in a discrete mathematics course that emphasizes essential topics or in a mathematics major or minor course that serves as a transition to abstract mathematical thinking. The ideas of discrete mathematics underlie and are essential to the science and technology of the computer age. This book offers a synergistic union of the major themes of discrete mathematics together with the reasoning that underlies mathematical thought. Renowned for her lucid, accessible prose, Epp explains complex, abstract concepts with clarity and precision, helping students develop the ability to think abstractly as they study each topic. In doing so, the book provides students with a strong foundation both for computer science and for other upper-level mathematics courses. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Discrete Mathematics: Introduction to Mathematical Reasoning

A Beginner's Guide to Discrete Mathematics

Discrete Mathematics and Graph Theory