Combinatorial Optimization

By Christos H. Papadimitriou & Kenneth Steiglitz
Genre : Mathematics

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Combinatorial Optimization by Christos H. Papadimitriou & Kenneth Steiglitz is Mathematics This clearly written, mathematically rigorous text includes a novel algorithmic exposition of the simplex method and also discusses the Soviet ellipsoid algorithm for linear programming; efficient algorithms for network flow, matching, spanning trees, and matroids; the theory of NP-complete problems; approximation algorithms, local search heuristics for NP-complete problems, more. All chapters are supplemented by thought-provoking problems. A useful work for graduate-level students with backgrounds in computer science, operations research, and electrical engineering. "Mathematicians wishing a self-contained introduction need look no further." — American Mathematical Monthly.

More Recommended Books

Geometry in Pictures Book 3

By : Joyce Hull
Geometry in Pictures Book 3 is the tenth book in the series, covering the properties of circles with proofs, including the symmetry, tangent and angles properties. Proving and applying the formulae for the area of a scalene triangle, the sine rule and the cosine rule. Applying trigonometry to calculate angles of elevation and depression, and in various triangles. Trigonometry in there dimensions. Defining the trigonometry ratios for any angle, comparing graphs and solving trigonometry equations. Combining translations, rotations and reflections. There are galleries where appropriate. Review questions are at the end of each section. The review questions require iOS 10 or higher.

Mathematics Of Life

By : Professor Ian Stewart
A new partnership of biologists and mathematicians is picking apart the hidden complexity of animals and plants to throw fresh light on the behaviour of entire organisms, how they interact and how changes in biological diversity affect the planet's ecological balance. Mathematics offers new and sometimes startling perspectives on evolution and how patterns of inheritance and population work out over time-scales ranging from millions to hundreds of years - as well as what's going on to change us right now. Ian Stewart, in characteristically clear and entertaining fashion, explores these and a whole range of pertinent issues, including how far genes control behaviour and the nature of
life itself. He shows how far mathematicians and biologists are succeeding in tackling some of the
most difficult scientific problems the human race has ever confronted and where their research is
currently taking us.

**Integrated Arithmetic**

By : A. A. Frempong

Integrated Arithmetic covers: Basic Definitions; Terminology; and Types of Numbers; Writing Whole Numbers Using Numerals and Words; Basic Operations and Properties; Order of Operations and Evaluation of Arithmetic Expressions; Rounding-off Whole Numbers and Decimals; Estimation; Prime Numbers, Divisibility Rules; Prime Factorization; Least Common Multiple (LCM); Operations on Fractions and Mixed Numbers; Addition and Subtraction of Fractions; Comparison of Fractions and Subtraction of Mixed Numbers; Multiplication and Division: of Fractions and Mixed Numbers; Operations on Decimals; Comparison of Decimals; Complex Decimals; Dividing Decimals; Converting Fractions to Decimals; Ratio and Proportion; Proportion Problems; Percent (%) and Calculations Involving Percent; Averages; Profit and Loss; Areas and Perimeters; Bar, Line and Circle (Pie) Graphs; Scientific Notation; Measurements. Every home must have a copy of this book on the living room.

**An Introduction to Manifolds**

By : Loring W. Tu

Manifolds, the higher-dimensional analogues of smooth curves and surfaces, are fundamental objects in modern mathematics. Combining aspects of algebra, topology, and analysis, manifolds have also been applied to classical mechanics, general relativity, and quantum field theory. In this streamlined introduction to the subject, the theory of manifolds is presented with the aim of helping the reader achieve a rapid mastery of the essential topics. By the end of the book the reader should be able to compute, at least for simple spaces, one of the most basic topological invariants of a manifold, its de Rham cohomology. Along the way the reader acquires the knowledge and skills necessary for further study of geometry and topology. The second edition contains fifty pages of new material. Many passages have been rewritten, proofs simplified, and new examples and exercises added. This work may be used as a textbook for a one-semester graduate or advanced undergraduate course, as well as by students engaged in self-study. The requisite point-set topology is included in an appendix of twenty-five pages; other appendices review facts from real analysis and linear algebra. Hints and solutions are provided to many of the exercises and problems. Requiring only minimal undergraduate prerequisites, "An Introduction to Manifolds" is also an excellent foundation for the author's publication with Raoul Bott, "Differential Forms in Algebraic Topology."

**Lineare Funktionen und Gleichungssysteme**

By : Ewald Bamberger


**Intuitive Concepts in Elementary Topology**
By: B.H. Arnold
Classroom-tested and much-cited, this concise text offers a valuable and instructive introduction for undergraduates to the basic concepts of topology. It takes an intuitive rather than an axiomatic viewpoint, and can serve as a supplement as well as a primary text. A few selected topics allow students to acquire a feeling for the types of results and the methods of proof in mathematics, including mathematical induction. Subsequent problems deal with networks and maps, provide practice in recognizing topological equivalence of figures, examine a proof of the Jordan curve theorem for the special case of a polygon, and introduce set theory. The concluding chapters examine transformations, connectedness, compactness, and completeness. The text is well illustrated with figures and diagrams.

How to Ace Calculus

By: Colin Adams, Abigail Thompson & Joe
Written by three gifted-and funny-teachers, How to Ace Calculus provides humorous and readable explanations of the key topics of calculus without the technical details and fine print that would be found in a more formal text. Capturing the tone of students exchanging ideas among themselves, this unique guide also explains how calculus is taught, how to get the best teachers, what to study, and what is likely to be on exams—all the tricks of the trade that will make learning the material of first-semester calculus a piece of cake. Funny, irreverent, and flexible, How to Ace Calculus shows why learning calculus can be not only a mind-expanding experience but also fantastic fun.

Matemáticas Esenciales Ingeniería

By: Vázquez Sánchez, Agustín
La primera versión del ebook contiene los temas esenciales de geometría, vectores y determinantes, donde se ilustran, explican o demuestran conceptos esenciales de matemáticas que debe saber y dominar cualquier estudiante de ingeniería.

Introducción a los sistemas de coordenadas

By: Luis Guillermo de la Rosa
Con esta publicación podrás aprender a ubicar puntos en el plano cartesiano, polar, en el espacio y más, además podrás entender como transportarse de un tipo de coordenadas a otro.

Estatística Sem Matemática para as Ciências da Saúde

By: Christine P. Dancey
Esta obra apresenta a estatística para as ciências da saúde sem a utilização de fórmulas matemáticas complexas. Por meio de uma abordagem prática e acessível, os autores auxiliam a entender a lógica dos conceitos subjacentes às fórmulas, explicando como as análises são aplicadas em contextos reais de pesquisa na área. Estatística sem matemática para as ciências da saúde abrange desde conteúdos básicos para elaborar projetos de pesquisa, executar testes de hipóteses e realizar análises descritivas, até as mais elaboradas técnicas inferenciais. Leitura essencial para estudantes e professores de estatística nas áreas das ciências da saúde.