

## Elementary Number Theory Rosen Solutions Manual

These notes serve as course notes for an undergraduate course in number theory. Most if not all universities worldwide offer introductory courses in number theory in many cases as an elective course. The notes contain a useful introduction to important topics that need to be addressed in a course in number theory. Proofs of basic results are given in an interesting and comprehensive way that can be read and understood even by non-majors with the exception in the last three chapters where a background in analysis and abstract algebra is required. The exercises are carefully chosen to broaden the understanding of the concepts. Moreover, these notes shed light on analytic number theory, which is rarely seen or approached by undergraduate students. One of the unique characteristics of these notes is the careful choice of topics and its importance in the theory. The final part is given in the last two chapters because of the advanced nature of the topics that are presented.

An undergraduate-level introduction to number theory, with the emphasis on fully explained proofs and examples. Exercises, together with their solutions are integrated throughout. The first few chapters assume only basic school algebra. Elementary ideas about groups and rings are then used to study groups of units, quadratic residues and arithmetic progressions, with applications to enumeration and cryptography. The final part, suitable for third-year students, uses ideas from algebra, analysis, calculus and geometry to study Dirichlet's theorem on primes in arithmetic progressions and squares. In particular, the last chapter gives a concise account of Fermat's Last Theorem, from its origin in the ancient Babylonian and Greek study of Pythagorean triples to its proof by Andrew Wiles.

One of the traditional ways mathematical ideas and even new areas of mathematics are created is from experiments. One of the best-known examples is that of the Fermat conjecture, which was conjectured by Fermat in his attempts to find integer solutions for the famous Fermat equation. This hypothesis led to the creation of a whole field of knowledge in number theory after several hundred years. This book, based on the author's lectures, presents several new directions of mathematical research. All of these directions are based on problems first conducted by the author, which led to new hypotheses that currently remain open, i.e., are neither proved nor disproved. The hypotheses range from geometry and topology (curves and smooth functions) to combinatorics (combinatorial complexity and random permutations) to algebra and number theory (continuous fractions and Galois groups). On each subject, the author describes the problem and presents numerical results that led him to a particular conjecture. In the majority of cases there is an indication of how to approach the formulated conjectures (at least by conducting more numerical experiments). Written in Arnold's unique style, the book is intended for a wide range of mathematicians: from high school students interested in exploring unusual areas of mathematics on their own, to college and graduate students, to researchers interested in gaining a new perspective on doing mathematics. In the interest of fostering a greater awareness and appreciation of mathematics and its connections to other disciplines and every day life, AMS are publishing books in the Mathematical Circles Library series as a service to young people, their parents and teachers, and the mathematics profession. Titles in the series are published with the Mathematical Sciences Research Institute (MSRI).

New edition of a standard text. Integrates classical material with applications to cryptography and computer science. The author is with AT&T Bell Labs. Annotation copyright © 1994 by Inc. Portland, Or.

An Open Introduction

Student's Solutions Manual to Accompany Elementary Number Theory and Its Applications, Fourth Edition [by] Kenneth H. Rosen

Elementary Number Theory and Its Applications

Pell's Equation

A Course in Number Theory and Cryptography

Number theory is one of the few areas of mathematics where problems of substantial interest can be fully described to someone with minimal mathematical background. Solving such problems sometimes requires difficult and deep methods. But this is not a universal phenomenon; many engaging problems can be successfully attacked with little more than one's mathematical bare hands. In this case, the problem can be solved in an elementary way. Such elementary methods and the problems to which they apply are the subject of this book. Not Always Buried Deep is designed to be read and enjoyed by those who wish to explore elementary methods in modern number theory. The heart of the book is a thorough introduction to elementary prime number theory, including Dirichlet's theorem on primes in arithmetic progressions, the Brun sieve, and the Erdos-Selberg proof of the prime number theorem. Rather than trying to present a comprehensive treatise, Pollack focuses on topics that are particularly attractive and accessible. Other topics covered include Gauss's theory of cyclotomy and its applications to rational reciprocity laws, Hilbert's solution to Waring's problem, and modern results on perfect numbers. The nature of the material means that little is required in terms of prerequisites: The reader is expected to have prior familiarity with number theory at the level of an undergraduate and a first course in modern algebra (covering groups, rings, and fields). The exposition is complemented by over 200 exercises and 400 references.

This introductory textbook takes a problem-solving approach to number theory, situating each concept within the framework of an example or a problem for solving. Starting with the essentials, divisibility, unique factorization, modular arithmetic and the Chinese Remainder Theorem, Diophantine equations, binomial coefficients, Fermat and Mersenne primes and other special numbers, and sequences. Included are sections on mathematical induction and the pigeonhole principle, as well as a discussion of other number systems. By emphasizing examples and applications the authors aim to engage readers.

Elementary Number Theory and Its Applications Addison-Wesley

This text provides a simple account of classical number theory, as well as some of the historical background in which the subject evolved. It is intended for use in a one-semester, undergraduate

theory course taken primarily by mathematics majors and students preparing to be secondary school teachers. Although the text was written with this readership in mind, very few formal prerequisites are required. Much of the text can be read by students with a sound background in high school mathematics.

Elementary Number Theory

Number Theory

to accompany Elementary number theory and its applications / Kenneth H. Rosen

Selected Topics

Discrete Mathematics with Applications

*News about this title: – Author Marty Weissman has been awarded a Guggenheim Fellowship for 2020. (Learn more here.) – Selected as a 2018 CHOICE Outstanding Academic Title – 2018 PROSE Awards Honorable Mention An Illustrated Theory of Numbers gives a comprehensive introduction to number theory, with complete proofs, worked examples, and exercises. Its exposition reflects the most recent scholarship in mathematics and its history. Almost 500 sharp illustrations accompany elegant proofs, from prime decomposition through quadratic reciprocity. Geometric and dynamical arguments provide new insights, and allow for a rigorous approach with less algebraic manipulation. The final chapters contain an extended treatment of binary quadratic forms, using Conway's topograph to solve quadratic Diophantine equations (e.g., Pell's equation) and to study reduction and the finiteness of class numbers. Data visualizations introduce the reader to open questions and cutting-edge results in analytic number theory such as the Riemann hypothesis, boundedness of prime gaps, and the class number 1 problem. Accompanying each chapter, historical notes curate primary sources and secondary scholarship to trace the development of number theory within and outside the Western tradition. Requiring only high school algebra and geometry, this text is recommended for a first course in elementary number theory. It is also suitable for mathematicians seeking a fresh perspective on an ancient subject.*

*This book is a revised and greatly expanded version of our book Elements of Number Theory published in 1972. As with the first book the primary audience we envisage consists of upper level undergraduate mathematics majors and graduate students. We have assumed some familiarity with the material in a standard undergraduate course in abstract algebra. A large portion of Chapters 1-11 can be read even without such background with the aid of a small amount of supplementary reading. The later chapters assume some knowledge of Galois theory, and in Chapters 16 and 18 an acquaintance with the theory of complex variables is necessary. Number theory is an ancient subject and its content is vast. Any introductory book must, of necessity, make a very limited selection from the fascinating array of possible topics. Our focus is on topics which point in the direction of algebraic number theory and arithmetic algebraic geometry. By a careful selection of subject matter we have found it possible to exposit some rather advanced material without requiring very much in the way of technical background. Most of this material is classical in the sense that it was discovered during the nineteenth century and earlier, but it is also modern because it is intimately related to important research going on at the present time.*

*Johannes Buchmann is internationally recognized as one of the leading figures in areas of computational number theory, cryptography and information security. He has published numerous scientific papers and books spanning a very wide spectrum of interests; besides R&D he also fulfilled lots of administrative tasks for instance building up and directing his research group CDC at Darmstadt, but he also served as the Dean of the Department of Computer Science at TU Darmstadt and then went on to become Vice President of the university for six years (2001-2007). This festschrift, published in honor of Johannes Buchmann on the occasion of his 60th birthday, contains contributions by some of his colleagues, former students and friends. The papers give an overview of Johannes Buchmann's research interests, ranging from computational number theory and the hardness of cryptographic assumptions to more application-oriented topics such as privacy and hardware security. With this book we celebrate Johannes Buchmann's vision and achievements.*

*Unusually clear, accessible introduction covers counting, properties of numbers, prime numbers, Aliquot parts, Diophantine problems, congruences, much more. Bibliography.*

*Student's Solutions Manual Elementary Number Theory*

*A Classical Introduction to Modern Number Theory*

*An Introductory Course in Elementary Number Theory*

## Number Fields

### *Algorithms Sequential & Parallel: A Unified Approach*

**Requiring no more than a basic knowledge of abstract algebra, this text presents the mathematics of number fields in a straightforward, pedestrian manner. It therefore avoids local methods and presents proofs in a way that highlights the important parts of the arguments. Readers are assumed to be able to fill in the details, which in many places are left as exercises.**

**A precise, relevant, comprehensive approach to mathematical concepts...**

**This book offers an account of the classical theory of quadratic residues and non-residues with the goal of using that theory as a lens through which to view the development of some of the fundamental methods employed in modern elementary, algebraic, and analytic number theory. The first three chapters present some basic facts and the history of quadratic residues and non-residues and discuss various proofs of the Law of Quadratic Reciprocity in depth, with an emphasis on the six proofs that Gauss published. The remaining seven chapters explore some interesting applications of the Law of Quadratic Reciprocity, prove some results concerning the distribution and arithmetic structure of quadratic residues and non-residues, provide a detailed proof of Dirichlet's Class-Number Formula, and discuss the question of whether quadratic residues are randomly distributed. The text is a valuable resource for graduate and advanced undergraduate students as well as for mathematicians interested in number theory.**

**Solutions of equations in integers is the central problem of number theory and is the focus of this book. The amount of material is suitable for a one-semester course. The author has tried to avoid the ad hoc proofs in favor of unifying ideas that work in many situations. There are exercises at the end of almost every section, so that each new idea or proof receives immediate reinforcement.**

### *Elements of Number Theory*

#### *250 Problems in Elementary Number Theory*

#### *Not Always Buried Deep*

#### *An Introduction to Mathematical Reasoning*

#### *Student's Solutions Manual*

This is a substantially revised and updated introduction to arithmetic topics, both ancient and modern, that have been at the centre of interest in applications of number theory, particularly in cryptography. As such, no background in algebra or number theory is assumed, and the book begins with a discussion of the basic number theory that is needed. The approach taken is algorithmic, emphasising estimates of the efficiency of the techniques that arise from the theory, and one special feature is the inclusion of recent applications of the theory of elliptic curves. Extensive exercises and careful answers are an integral part all of the chapters.

The fourth edition of Kenneth Rosen's widely used and successful text, *Elementary Number Theory and Its Applications*, preserves the strengths of the previous editions, while enhancing the book's flexibility and depth of content coverage. The blending of classical theory with modern applications is a hallmark feature of the text. The Fourth Edition builds on this strength with new examples, additional applications and increased cryptology coverage. Up-to-date information on the latest discoveries is included. *Elementary Number Theory and Its Applications* provides a diverse group of exercises, including basic exercises designed to help students develop skills, challenging exercises and computer projects. In addition to years of use and professor feedback, the fourth edition of this text has been thoroughly accuracy checked to ensure the quality of the mathematical content and the exercises.

This is a book about prime numbers, congruences, secret messages, and elliptic curves that you can read cover to cover. It grew out of undergraduate courses that the author taught at Harvard, UC San Diego, and the University of Washington. The systematic study of number theory was initiated around 300B. C. when Euclid proved that there are infinitely many prime numbers, and also cleverly deduced the fundamental theorem of arithmetic, which asserts that every positive integer factors uniquely as a product of primes. Over a thousand years later (around 972A. D. ) Arab mathematicians formulated the congruent number problem that asks for a way to decide whether or not a given positive integer  $n$  is the area of a right triangle, all three of whose sides are rational numbers. Then another thousand years later (in 1976), Diffie and Hellman introduced the first ever public-key cryptosystem, which enabled two people to communicate secretly over a public communications channel with no predetermined secret; this invention and the ones that followed it revolutionized the world of digital communication. In the 1980s and 1990s, elliptic curves revolutionized number theory, providing striking new insights into the congruent number problem, primality testing, public-key cryptography, attacks on public-key systems, and playing a central role in Andrew Wiles' resolution of Fermat's Last Theorem.

The aim of this book is to handle different application problems of science and engineering using expert Artificial Neural Network (ANN). As such, the book starts with basics of ANN along with different mathematical preliminaries with respect to algebraic equations. Then it addresses ANN based methods for solving different algebraic equations viz. polynomial equations, diophantine equations, transcendental equations, system of linear and nonlinear equations, eigenvalue problems etc. which are the basic equations to handle the application problems mentioned in the content of the book. Although there exist various methods to handle these problems, but sometimes those may be problem dependent and may fail to give a converge solution with particular discretization. Accordingly, ANN based methods have been addressed here to solve these problems. Detail ANN architecture with step by step procedure and algorithm have been included. Different example problems are solved with respect to various application and mathematical problems. Convergence plots and/or convergence tables of the solutions are depicted to show the efficacy of these methods. It is worth mentioning that various application problems viz. Bakery problem, Power electronics applications, Pole placement, Electrical Network Analysis, Structural engineering problem etc. have been solved using the ANN based methods.

#### A Computational Approach

Applied Artificial Neural Network Methods For Engineers And Scientists: Solving Algebraic Equations

Number Theory and Cryptography

Quadratic Residues and Non-Residues

Elementary Number Theory with Applications

*Known for its accessible, precise approach, Epp's DISCRETE MATHEMATICS WITH APPLICATIONS, 5th Edition, introduces discrete mathematics with clarity and precision. Coverage emphasizes the major themes of discrete mathematics as well as the reasoning that underlies mathematical thought. Students learn to think abstractly as they study the ideas of logic and proof. While learning about logic circuits and computer addition, algorithm analysis, recursive thinking, computability, automata, cryptography and combinatorics, students discover that ideas of discrete mathematics underlie and are essential to today's science and technology. The author's emphasis on reasoning provides a 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.*

*This text provides a balanced survey of major sub-fields within discrete mathematics. It demonstrates the utility of discrete mathematics in the solutions of real-world problems in diverse areas such as zoology, linguistics and business. Over 200 new problems have been added to this third edition.*

*Pell's equation is part of a central area of algebraic number theory that treats quadratic forms and the structure of the rings of integers in algebraic number fields. It is an ideal topic to lead college students, as well as some talented and motivated high school students, to a better appreciation of the power of mathematical technique. Even at the specific level of quadratic diophantine equations, there are unsolved problems, and the higher degree analogues of Pell's equation, particularly beyond the third, do not appear to have been well studied. In this focused exercise book, the topic is motivated and developed through sections of exercises which will allow the readers to recreate known theory and provide a focus for their algebraic practice. There are several explorations that encourage the reader to embark on their own research. A high school background in mathematics is all that is needed to get into this book, and teachers and others interested in mathematics who do not have (or have forgotten) a background in advanced mathematics may find that it is a suitable vehicle for keeping up an independent interest in the subject.*

*In a manner accessible to beginning undergraduates, An Invitation to Modern Number Theory introduces many of the central problems, conjectures, results, and techniques of the field, such as the Riemann Hypothesis, Roth's Theorem, the Circle Method, and Random Matrix Theory. Showing how experiments are used to test conjectures and prove theorems, the book allows students to do original work on such problems, often using little more than calculus (though there are numerous remarks for those with deeper backgrounds). It shows students what number theory theorems are used for and what led to them and suggests problems for further research. Steven Miller and Ramin Takloo-Bighash introduce the problems and the computational skills required to numerically investigate them, providing background material (from probability to statistics to Fourier analysis) whenever necessary. They guide students through a variety of problems, ranging from basic number theory, cryptography, and Goldbach's Problem, to the algebraic structures of numbers and continued fractions, showing connections between these subjects and encouraging students to study them further. In addition, this is the first undergraduate book to explore Random Matrix Theory, which has recently become a powerful tool for predicting answers in number theory. Providing exercises, references to the background literature, and Web links to previous student research projects, An Invitation to Modern Number Theory can be used to teach a research seminar or a lecture class.*

*Elementary Methods in Number Theory*

*Student's Solutions Manual to accompany Elementary Number Theory*

*Discrete Mathematics and Its Applications*

*An Illustrated Theory of Numbers*

*Official Gazette*

Contains solutions to odd-numbered exercises and provides extra assistance through chapter walk-throughs for students who want extra guidance.

Elementary Number Theory, Gove Effinger, Gary L. Mullen This text is intended to be used as an undergraduate introduction to the theory of numbers. The authors have been immersed in this area of mathematics for many years and hope that this text will inspire students (and instructors) to study, understand, and come to love this truly beautiful subject. Each chapter, after an introduction, develops a new topic clearly broken out in sections which include theoretical material together with numerous examples, each worked out in considerable detail. At the end of each chapter, after a summary of the topic, there are a number of solved problems, also worked out in detail, followed by a set of supplementary problems. These latter problems give students a chance to test their own understanding of the material; solutions to some but not all of them complete the chapter. The first eight chapters discuss some standard material in elementary number theory. The remaining chapters discuss topics which might be considered a bit more advanced. The text closes with a chapter on Open Problems in Number Theory. Students (and of course instructors) are strongly encouraged to study this chapter carefully and fully realize that not all mathematical issues and problems have been resolved! There is still much to be learned and many questions to be answered in mathematics in general and in number theory in particular.

Elementary Number Theory and Its Applications is noted for its outstanding exercise sets, including basic exercises, exercises designed to help students explore key concepts, and challenging exercises. Computational exercises and computer projects are also provided. In addition to years of use and professor feedback, the fifth edition of this text has been thoroughly checked to ensure the quality and accuracy of the mathematical content and the exercises. The blending of classical theory with modern applications is a hallmark feature of the text. The Fifth Edition builds on this strength with new examples and exercises, additional applications and increased cryptology coverage. The author devotes a great deal of attention to making this new edition up-to-date, incorporating new results and discoveries in number theory made in the past few years.

This third volume of problems from the William Lowell Putnam Competition is unlike the previous two in that it places the problems in the context of important mathematical themes. The authors highlight connections to other problems, to the curriculum and to more advanced topics. The best problems contain kernels of sophisticated ideas related to important current research, and yet the problems are accessible to undergraduates. The solutions have been compiled from the American Mathematical Monthly, Mathematics Magazine and past competitors. Multiple solutions enhance the understanding of the audience, explaining techniques that have relevance to more than the problem at hand. In addition, the book contains suggestions for further reading, a hint to each problem, separate from the full solution and background information about the competition. The book will appeal to students, teachers, professors and indeed anyone

interested in problem solving as a gateway to a deep understanding of mathematics.

A Second Course in Elementary Number Theory

Elementary Number Theory: Primes, Congruences, and Secrets

Numbers, Sets and Functions

An Invitation to Modern Number Theory

Equip yourself for success with a state-of-the-art approach to algorithms available only in Miller/Boxer's ALGORITHMS SEQUENTIAL AND PARALLEL: A UNIFIED APPROACH, 3E. This unique and functional text gives you an introduction to algorithms and paradigms for modern computing systems, integrating the study of parallel and sequential algorithms within a focused presentation. With a wide range of practical exercises and engaging examples drawn from fundamental application domains, this book prepares you to design, analyze, and implement algorithms for modern computing systems. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Elementary Number Theory, Sixth Edition, blends classical theory with modern applications and is notable for its outstanding exercise sets. A full range of exercises, from basic to challenging, helps readers explore key concepts and push their understanding to new heights. Computational exercises and computer projects are also available. Reflecting many years of professors' feedback, this edition offers new examples, exercises, and applications, while incorporating advancements and discoveries in number theory made in the past few years.

This book eases students into the rigors of university mathematics. The emphasis is on understanding and constructing proofs and writing clear mathematics. The author achieves this by exploring set theory, combinatorics, and number theory, topics that include many fundamental ideas and may not be a part of a young mathematician's toolkit. This material illustrates how familiar ideas can be formulated rigorously, provides examples demonstrating a wide range of basic methods of proof, and includes some of the all-time-great classic proofs. The book presents mathematics as a continually developing subject. Material meeting the needs of readers from a wide range of backgrounds is included. The over 250 problems include questions to interest and challenge the most able student but also plenty of routine exercises to help familiarize the reader with the basic ideas.

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](http://discrete.openmathbooks.org)

Number Theory and Its History

Second Edition

Student Solutions Guide for Discrete Mathematics and Its Applications

Structures, Examples, and Problems

The William Lowell Putnam Mathematical Competition 1985 – 2000: Problems, Solutions, and Commentary

**Elementary Methods in Number Theory begins with "a first course in number theory" for students with no previous knowledge of the subject. The main topics are divisibility, prime numbers, and congruences. There is also an introduction to Fourier analysis on finite abelian groups, and a discussion on the abc conjecture and its consequences in elementary number theory. In the second and third parts of the book, deep results in number theory are proved using only elementary methods. Part II is about multiplicative number theory, and includes two of the most famous results in mathematics: the Erdős-Selberg elementary proof of the prime number theorem, and Dirichlet's theorem on primes in arithmetic progressions. Part III is an introduction to three classical topics in additive number theory: Waring's problems for polynomials, Liouville's method to determine the number of representations of an integer as the sum of an even number of squares, and the asymptotics of partition functions. Melvyn B. Nathanson is Professor of Mathematics at the City University of New York (Lehman College and the Graduate Center). He is the author of the two other graduate texts: Additive Number Theory: The Classical Bases and Additive Number Theory: Inverse Problems and the Geometry of Sumsets.**

**This practical and versatile text evolved from the author's years of teaching experience and the input of his students. Vanden Eynden strives to alleviate the anxiety that many students experience when approaching any proof-oriented area of mathematics, including number theory. His informal yet straightforward writing style explains the ideas behind the process of proof construction, showing that mathematicians develop theorems and proofs from trial and error and evolutionary improvement, not spontaneous insight. Furthermore, the book includes more computational problems than most other number theory texts to build students' familiarity and confidence with the theory behind the material. The author has devised the content, organization, and writing style so that information is accessible, students can gain self-confidence with respect to mathematics, and the book can be used in a wide range of courses—from those that emphasize history and type A problems to those that are proof oriented.**

**Discrete Mathematics and its Applications, Sixth Edition, is intended for one- or two-term introductory discrete mathematics courses taken by students from a wide variety of**

majors, including computer science, mathematics, and engineering. This renowned best-selling text, which has been used at over 500 institutions around the world, gives a focused introduction to the primary themes in a discrete mathematics course and demonstrates the relevance and practicality of discrete mathematics to a wide a wide variety of real-world applications...from computer science to data networking, to psychology, to chemistry, to engineering, to linguistics, to biology, to business, and to many other important fields.

This second edition updates the well-regarded 2001 publication with new short sections on topics like Catalan numbers and their relationship to Pascal's triangle and Mersenne numbers, Pollard rho factorization method, Hoggatt-Hensell identity. Koshy has added a new chapter on continued fractions. The unique features of the first edition like news of recent discoveries, biographical sketches of mathematicians, and applications--like the use of congruence in scheduling of a round-robin tournament--are being refreshed with current information. More challenging exercises are included both in the textbook and in the instructor's manual. Elementary Number Theory with Applications 2e is ideally suited for undergraduate students and is especially appropriate for prospective and in-service math teachers at the high school and middle school levels. \* Loaded with pedagogical features including fully worked examples, graded exercises, chapter summaries, and computer exercises \* Covers crucial applications of theory like computer security, ISBNs, ZIP codes, and UPC bar codes \* Biographical sketches lay out the history of mathematics, emphasizing its roots in India and the Middle East

Discrete Mathematics

Papers in Honor of Johannes Buchmann on the Occasion of His 60th Birthday

Experimental Mathematics