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[Primes of the Form \$x^2 + ny^2\$](#) Oct 11 2020 Modern number theory began with the work of Euler and Gauss to understand and extend the many unsolved questions left behind by Fermat. In the course of their investigations, they uncovered new phenomena in need of explanation, which over time led to the discovery of field theory and its intimate connection with complex multiplication. While most texts concentrate on only the elementary or advanced aspects of this story, [Primes of the Form \$x^2 + ny^2\$](#) begins with Fermat and explains how his work ultimately gave birth to quadratic reciprocity and the genus theory of quadratic forms. Further, the book shows how the results of Euler and Gauss can be fully understood only in the context of class field theory. Finally, in order to bring class field theory down to earth, the book explores some of the magnificent formulas of complex multiplication. The central theme of the book is the story of which primes p can be expressed in the form $x^2 + ny^2$. An incomplete answer is given using quadratic forms. A better though abstract answer comes from class field theory, and finally, a concrete answer is provided by complex multiplication. Along the way, the reader is introduced to some wonderful number theory. Numerous exercises and examples are included. The book is written to be enjoyed by readers with modest mathematical backgrounds. Chapter 1 uses basic number theory and abstract algebra, while chapters 2 and 3 require Galois theory and complex analysis, respectively.

[Number Theory](#) Oct 23 2021 Undergraduate text uses combinatorial approach to accommodate both math majors and liberal arts students. Covers the basics of number theory, offers an outstanding introduction to partitions, plus chapters on multiplicativity-divisibility, quadratic congruences, additivity, and more

[A Course in Computational Number Theory](#) Feb 12 2021 A Course in Computational Number Theory uses the computer as a tool for motivation and explanation. The book is designed for the reader to quickly access a computer and begin doing personal experiments with the patterns of the integers. It presents and explains many of the fastest algorithms for working with integers. Traditional topics are covered, but the text also explores factoring algorithms, primality testing, the RSA public-key cryptosystem, and unusual applications such as check digit schemes and a computation of the energy that holds a salt crystal together. Advanced topics include continued fractions, Pell's equation, and the Gaussian primes.

[Number Theory](#) Mar 04 2020 Number theory is the branch of mathematics primarily concerned with the counting numbers, especially primes. It dates back to the ancient Greeks, but today it has great practical importance in cryptography, from credit card security to national defence. This book introduces the main areas of number theory, and some of its most interesting problems.

[Elementary Number Theory: Primes, Congruences, and Secrets](#) Jul 20 2021 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.

Surveys in Number Theory Sep 29 2019 Number theory has a wealth of long-standing problems, the study of which over the years has led to major developments in many areas of mathematics. This volume consists of seven significant chapters on number theory and related topics. Written by distinguished mathematicians, key topics focus on multipartitions, congruences and identities (G. Andrews), the formulas of Koshliakov and Guinand in Ramanujan's Lost Notebook (B. C. Berndt, Y. Lee, and J. Sohn), alternating sign matrices and the Weyl character formulas (D. M. Bressoud), theta functions in complex analysis (H. M. Farkas), representation functions in additive number theory (M. B. Nathanson), and mock theta functions, ranks, and Maass forms (K. Ono), and elliptic functions (M. Waldschmidt).

Elementary Number Theory Sep 02 2022 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 number 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 Dec 13 2020 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.

Introduction to Number Theory, 2nd Edition Nov 23 2021 The authors of this classroom-tested, student-friendly text illustrate the connections between number theory and other areas of mathematics, including algebra, analysis, and combinatorics. They also describe applications of number theory to real-world problems such as congruences in the ISBN system, modular arithmetic, and Euler's theorem in RSA encryption and quadratic residues in the construction of tournaments. The book interweaves the theoretical development of the material with Mathematica® and Maple™ calculations, while giving brief tutorials on the software in the appendices.

Galois Cohomology and Class Field Theory Mar 16 2021 This graduate textbook offers an introduction to modern methods in number theory. It gives a complete account of the main results of class field theory as well as the Poitou-Tate duality theorems, considered crowning achievements of modern number theory. Assuming a first graduate course in algebra and number theory, the book begins with an introduction to group and Galois cohomology. Local fields and local class field theory, including Lubin-Tate formal group laws, are covered next, followed by global class field theory and the description of abelian extensions of global fields. The final part of the book gives an accessible yet complete exposition of the Poitou-Tate duality theorems. Two appendices cover the necessary background in homological algebra and the analytic theory of Dirichlet L-series, including the Artin density theorem. Based on several advanced courses given by the author, this textbook has been written for graduate students. Including complete proofs and numerous exercises, the book will also appeal to more experienced mathematicians, either as a text to learn the subject or as a reference.

Elements of Number Theory Jun 18 2021 Clear, detailed exposition that can be understood by readers with no background in advanced mathematics. More than 200 problems and full solutions, plus 100 numerical exercises. 1949 edition.

The Penguin Dictionary of Curious and Interesting Numbers Oct 30 2019 Why was the number of Hardy's taxi significant? Why does Graham's number need its own notation? How many grains of sand would fill the universe? What is the connection between the Golden Ratio and sunflowers? Why is 999 more than a distress call? All these questions and a host more are answered in this fascinating book, which has now been newly revised, with nearly 200 extra entries and some 250 additions to the original entries. From minus one and its square root, via cyclic, weird, amicable, perfect, untouchable and lucky numbers, aliquot sequences, the Cattle problem, Pascal's triangle and the Syracuse algorithm, music, magic and maps, pancakes, polyhedra and palindromes, to numbers so large that they boggle the imagination, all you ever wanted to know about numbers is here. There is even a comprehensive index for those annoying occasions when you remember the name but can't recall the number.

Algebraic Number Theory and Fermat's Last Theorem Jun 30 2022 First published in 1979 and written by two distinguished mathematicians with a special gift for exposition, this

book is now available in a completely revised third edition. It reflects the exciting developments in number theory during the past two decades that culminated in the proof of Fermat's Last Theorem. Intended as an upper level textbook, it

Elementary Number Theory Dec 25 2021 An undergraduate-level introduction to number theory, with the emphasis on fully explained proofs and examples. Exercises, together with their solutions are integrated into the text, and 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 functions 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 series and sums of 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 recent proof by Andrew Wiles.

Elementary Number Theory Aug 28 2019 "With almost a thousand imaginative exercises and problems, this book stimulates curiosity about numbers and their properties."

Number Theory Through Inquiry Apr 28 2022 Number Theory Through Inquiry is an innovative textbook that leads students on a carefully guided discovery of introductory number theory. The book has two equally significant goals. One goal is to help students develop mathematical thinking skills, particularly, theorem-proving skills. The other goal is to help students understand some of the wonderfully rich ideas in the mathematical study of numbers. This book is appropriate for a proof transitions course, for an independent study experience, or for a course designed as an introduction to abstract mathematics. Math or related majors, future teachers, and students or adults interested in exploring mathematical ideas on their own will enjoy Number Theory Through Inquiry. Number theory is the perfect topic for an introduction-to-proofs course. Every college student is familiar with basic properties of numbers, and yet the exploration of those familiar numbers leads us to a rich landscape of ideas. Number Theory Through Inquiry contains a carefully arranged sequence of challenges that lead students to discover ideas about numbers and to discover methods of proof on their own. It is designed to be used with an instructional technique variously called guided discovery or Modified Moore Method or Inquiry Based Learning (IBL). Instructors' materials explain the instructional method. This style of instruction gives students a totally different experience compared to a standard lecture course. Here is the effect of this experience: Students learn to think independently: they learn to depend on their own reasoning to determine right from wrong; and they develop the central, important ideas of introductory number theory on their own. From that experience, they learn that they can personally create important ideas, and they develop an attitude of personal reliance and a sense that they can think effectively about difficult problems. These goals are fundamental to the educational enterprise within and beyond mathematics.

Number Theory Jul 28 2019 Number theory is one of the oldest branches of mathematics that is primarily concerned with positive integers. While it has long been studied for its beauty and elegance as a branch of pure mathematics, it has seen a resurgence in recent years with the advent of the digital world for its modern applications in both computer science and cryptography. Number Theory: Step by Step is an undergraduate-level introduction to number theory that assumes no prior knowledge, but works to gradually increase the reader's confidence and ability to tackle more difficult material. The strength of the text is in its large number of examples and the step-by-step explanation of each topic as it is introduced to help aid understanding the abstract mathematics of number theory. It is compiled in such a way that allows self-study, with explicit solutions to all the set of problems freely available online via the companion website. Punctuating the text are short and engaging historical profiles that add context for the topics covered and provide a dynamic background for the subject matter.

From Operator Theory to Orthogonal Polynomials, Combinatorics, and Number Theory Jan 02 2020 The main topics of this volume, dedicated to Lance Littlejohn, are operator and spectral theory, orthogonal polynomials, combinatorics, number theory, and the various interplays of these subjects. Although the event, originally scheduled as the Baylor Analysis Fest, had to be postponed due to the pandemic, scholars from around the globe have contributed research in a broad range of mathematical fields. The collection will be of interest to both graduate students and professional mathematicians. Contributors are: G.E. Andrews, B.M. Brown, D. Damanik, M.L. Dawsey, W.D. Evans, J. Fillman, D. Frymark, A.G. García, L.G. Garza, F. Gesztesy, D. Gómez-Ullate, Y. Grandati, F.A. Grünbaum, S. Guo, M. Hunziker, A. Iserles, T.F. Jones, K. Kirsten, Y. Lee, C. Liaw, F. Marcellán, C. Markett, A. Martínez-Finkelshtein, D. McCarthy, R. Milson, D. Mitrea, I. Mitrea, M. Mitrea, G. Novello, D. Ong, K. Ono, J.L. Padgett, M.M.M. Pang, T. Poe, A. Sri Ranga, K. Schiefermayr, Q. Sheng, B. Simanek, J. Stanfill, L. Velázquez, M. Webb, J. Wilkening, I.G. Wood, M. Zinchenko.

Elementary Number Theory in Nine Chapters Apr 04 2020 This book serves as a one-semester introductory course in number theory. Throughout the book, Tattersall adopts a historical perspective and gives emphasis to some of the subject's applied aspects, highlighting the field of cryptography. At the heart of the book are the major number theoretic accomplishments of Euclid, Fermat, Gauss, Legendre, and Euler, and to fully illustrate the properties of numbers and concepts developed in the text, a wealth of exercises has been included. The reader should have "pencil in hand" and ready access to a calculator or computer. For students new to number theory, whatever their background, this is a stimulating and entertaining introduction to the subject.

Dynamics, Geometry, Number Theory Mar 28 2022 This definitive synthesis of mathematician Gregory Margulis's research brings together leading experts to cover the breadth and diversity of disciplines Margulis's work touches upon. This edited collection highlights the foundations and evolution of research by widely influential Fields Medalist Gregory

Margulis. Margulis is unusual in the degree to which his solutions to particular problems have opened new vistas of mathematics; his ideas were central, for example, to developments that led to the recent Fields Medals of Elon Lindenstrauss and Maryam Mirzakhani. Dynamics, Geometry, Number Theory introduces these areas, their development, their use in current research, and the connections between them. Divided into four broad sections—"Arithmeticity, Superrigidity, Normal Subgroups"; "Discrete Subgroups"; "Expanders, Representations, Spectral Theory"; and "Homogeneous Dynamics"—the chapters have all been written by the foremost experts on each topic with a view to making them accessible both to graduate students and to experts in other parts of mathematics. This was no simple feat: Margulis's work stands out in part because of its depth, but also because it brings together ideas from different areas of mathematics. Few can be experts in all of these fields, and this diversity of ideas can make it challenging to enter Margulis's area of research. Dynamics, Geometry, Number Theory provides one remedy to that challenge.

Number Theory Through Inquiry Jun 06 2020 Number Theory Through Inquiry; is an innovative textbook that leads students on a carefully guided discovery of introductory number theory. The book has two equally significant goals. One goal is to help students develop mathematical thinking skills, particularly, theorem-proving skills. The other goal is to help students understand some of the wonderfully rich ideas in the mathematical study of numbers. This book is appropriate for a proof transitions course, for an independent study experience, or for a course designed as an introduction to abstract mathematics. Math or related majors, future teachers, and students or adults interested in exploring mathematical ideas on their own will enjoy; Number Theory Through Inquiry; Number theory is the perfect topic for an introduction-to-proofs course. Every college student is familiar with basic properties of numbers, and yet the exploration of those familiar numbers leads us to a rich landscape of ideas. Number Theory Through Inquiry contains a carefully arranged sequence of challenges that lead students to discover ideas about numbers and to discover methods of proof on their own. It is designed to be used with an instructional technique variously called guided discovery or Modified Moore Method or Inquiry Based Learning (IBL). Instructors materials explain the instructional method. This style of instruction gives students a totally different experience compared to a standard lecture course. Here is the effect of this experience: Students learn to think independently: they learn to depend on their own reasoning to determine right from wrong; and they develop the central, important ideas of introductory number theory on their own. From that experience, they learn that they can personally create important ideas. They develop an attitude of personal reliance and a sense that they can think effectively about difficult problems. These goals are fundamental to the educational enterprise within and beyond mathematics.

Elements of Number Theory Aug 09 2020 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.

Proof and the Art of Mathematics Feb 01 2020 How to write mathematical proofs, shown in fully-worked out examples. This is a companion volume Joel Hamkins's Proof and the Art of Mathematics, providing fully worked-out solutions to all of the odd-numbered exercises as well as a few of the even-numbered exercises. In many cases, the solutions go beyond the exercise question itself to the natural extensions of the ideas, helping readers learn how to approach a mathematical investigation. As Hamkins asks, "Once you have solved a problem, why not push the ideas harder to see what further you can prove with them?" These solutions offer readers examples of how to write a mathematical proofs. The mathematical development of this text follows the main book, with the same chapter topics in the same order, and all theorem and exercise numbers in this text refer to the corresponding statements of the main text.

Advanced Number Theory with Applications Jul 08 2020 Exploring one of the most dynamic areas of mathematics, Advanced Number Theory with Applications covers a wide range of algebraic, analytic, combinatorial, cryptographic, and geometric aspects of number theory. Written by a recognized leader in algebra and number theory, the book includes a page reference for every citing in the bibliography and mo

The Theory of Algebraic Number Fields Jan 26 2022 A translation of Hilberts "Theorie der algebraischen Zahlkörper" best known as the "Zahlbericht", first published in 1897, in which he provides an elegantly integrated overview of the development of algebraic number theory up to the end of the nineteenth century. The Zahlbericht also provided a firm foundation for further research in the theory, and can be seen as the starting point for all twentieth century investigations into the subject, as well as reciprocity laws and class field theory. This English edition further contains an introduction by F. Lemmermeyer and N. Schappacher.

Fundamentals of Number Theory Sep 21 2021 DIVBasic treatment, incorporating language of abstract algebra and a history of the discipline. Unique factorization and the GCD, quadratic residues, sums of squares, much more. Numerous problems. Bibliography. 1977 edition. /div

Student's Solutions Manual Elementary Number Theory Nov 11 2020

The Higher Arithmetic May 06 2020 The theory of numbers is generally considered to be the 'purest' branch of pure mathematics and demands exactness of thought and exposition from its devotees. It is also one of the most highly active and engaging areas of mathematics. Now into its eighth edition The Higher Arithmetic introduces the concepts and theorems of number theory in a way that does not require the reader to have an in-depth knowledge of the theory of numbers but also touches upon matters of deep mathematical significance.

Since earlier editions, additional material written by J. H. Davenport has been added, on topics such as Wiles' proof of Fermat's Last Theorem, computers and number theory, and primality testing. Written to be accessible to the general reader, with only high school mathematics as prerequisite, this classic book is also ideal for undergraduate courses on number theory, and covers all the necessary material clearly and succinctly.

Elementary Number Theory Nov 04 2022 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 number theory course.

Elementary Theory of Numbers May 18 2021 Since the publication of the first edition of this work, considerable progress has been made in many of the questions examined. This edition has been updated and enlarged, and the bibliography has been revised. The variety of topics covered here includes divisibility, diophantine equations, prime numbers (especially Mersenne and Fermat primes), the basic arithmetic functions, congruences, the quadratic reciprocity law, expansion of real numbers into decimal fractions, decomposition of integers into sums of powers, some other problems of the additive theory of numbers and the theory of Gaussian integers.

Introduction to Analysis Apr 16 2021 "The topics are quite standard: convergence of sequences, limits of functions, continuity, differentiation, the Riemann integral, infinite series, power series, and convergence of sequences of functions. Many examples are given to illustrate the theory, and exercises at the end of each chapter are keyed to each section."--pub. desc.

Student's Solutions Manual to accompany Elementary Number Theory Sep 09 2020

Elementary Number Theory with Applications Dec 01 2019 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

HIGHER ALGEBRA Feb 24 2022 The Classic Texts Series is the only of its kind selection of classic pieces of work that started off as bestseller and continues to be the bestseller even today. These classic texts have been designed so as to work as elementary textbooks which play a crucial role in building the concepts from scratch as in-depth knowledge of concepts is necessary for students preparing for various entrance exams. The present book on Higher Algebra presents all the elements of Higher Algebra in a single book meant to work as textbook for the students beginning their preparation of the varied aspects covered under Higher Algebra. The present book has been divided into 35 chapters namely Ratio, Proportion, Variation, Arithmetical Progression, Geometrical Progression, Harmonical Progression Theorems Connected with The Progression, Scales of Notation, Surds & Imaginary Quantities, The Theory of Quadratic Equations, Miscellaneous Equations, Permutations & Combinations, Mathematical Induction, Binomial Theorem Positive Integral Index, Binomial Theorem, Any Index, Multinomial Theorem, Logarithms, Exponential & Logarithmic Series, Interest & Annuities, Inequalities, Limiting Values & Vanishing Fractions, Convergency & Divergency of Series, Undetermined Coefficients, Partial Fractions, Recurring Series, Continued Fractions, Recurring Series, Continued Fractions, Indeterminate Equations of the First Degree, Recurring Continued Fractions, Indeterminate Equations of the Second Degree, Summation of Series, Theory of Numbers, The General Theory of Continued Fractions, Probability, Determinants, Miscellaneous Theorems & Examples and Theory of Equations, each subdivided into number of topics. The first few chapters in the book have been devoted to a fuller discussion of Ratio, Proportions, Variation and the Progressions. Both the theoretical text as well as examples have been treated minutely which will help in better understanding of the concepts covered in the book. Theoretical explanation of the concepts in points has been provided at the beginning of each chapter. At the end of each chapter, unsolved practice exercises have been provided to help aspirants revise the concepts discussed in the chapter. At the end of chapterwise study, miscellaneous examples have also been given along with answers and solutions to the unsolved examples covered in each chapter. All the relevant theorems covered under the syllabi of Higher Algebra have also been covered in the detail in this book. As the book covers the whole syllabi of Higher Algebra in detail along with ample number of solved examples, it for sure will help the students perfect the varied concepts covered under the Higher Algebra section.

Algorithmic Number Theory Aug 21 2021 Self-organized criticality (SOC) has become a magic word in various scientific disciplines; it provides a framework for understanding complexity and scale invariance in systems showing irregular fluctuations. In the first 10 years after Per Bak and his co-workers presented their seminal idea, more than 2000 papers on this topic appeared. Seismology has been a field in earth sciences where the SOC concept has already deepened the understanding, but there seem to be much more examples in earth sciences where applying the SOC concept may be fruitful. After introducing the reader into the basics of fractals, chaos and SOC, the book presents established and new applications of SOC in earth sciences, namely earthquakes, forest fires, landslides and drainage networks.

Irrationality and Transcendence in Number Theory Aug 01 2022 Irrationality and Transcendence in Number Theory tells the story of irrational numbers from their discovery in the days of Pythagoras to the ideas behind the work of Baker and Mahler on transcendence in the 20th century. It focuses on themes of irrationality, algebraic and transcendental numbers, continued fractions, approximation of real numbers by rationals, and relations between automata and transcendence. This book serves as a guide and introduction to number theory for advanced undergraduates and early postgraduates. Readers are led through the developments in number theory from ancient to modern times. The book includes a wide range of exercises, from routine problems to surprising and thought-provoking extension material. Features Uses techniques from widely diverse areas of mathematics, including number theory, calculus, set theory, complex analysis, linear algebra, and the theory of computation. Suitable as a primary textbook for advanced undergraduate courses in number theory, or as supplementary reading for interested postgraduates. Each chapter concludes with an appendix setting out the basic facts needed from each topic, so that the book is accessible to readers without any specific specialist background.

Introduction to Number Theory May 30 2022 One of the oldest branches of mathematics, number theory is a vast field devoted to studying the properties of whole numbers. Offering a flexible format for a one- or two-semester course, Introduction to Number Theory uses worked examples, numerous exercises, and two popular software packages to describe a diverse array of number theory topics

Challenge and Thrill of Pre-College Mathematics Jun 26 2019 Challenge And Thrill Of Pre-College Mathematics Is An Unusual Enrichment Text For Mathematics Of Classes 9, 10, 11 And 12 For Use By Students And Teachers Who Are Not Content With The Average Level That Routine Text Dare Not Transcend In View Of Their Mass Clientele. It Covers Geometry, Algebra And Trigonometry Plus A Little Of Combinatorics. Number Theory And Probability. It Is Written Specifically For The Top Half Whose Ambition Is To Excel And Rise To The Peak Without Finding The Journey A Forced Uphill Task. The Undercurrent Of The Book Is To Motivate The Student To Enjoy The Pleasures Of A Mathematical Pursuit And Of Problem Solving. More Than 300 Worked Out Problems (Several Of Them From National And International Olympiads) Share With The Student The Strategy, The Excitement, Motivation, Modeling, Manipulation, Abstraction, Notation And Ingenuity That Together Make Mathematics. This Would Be The Starting Point For The Student, Of A Life-Long Friendship With A Sound Mathematical Way Of Thinking. There Are Two Reasons Why The Book Should Be In The Hands Of Every School Or College Student, (Whether He Belongs To A Mathematics Stream Or Not) One, If He Likes Mathematics And, Two, If He Does Not Like Mathematics- The Former, So That The Cramped Robot-Type Treatment In The Classroom Does Not Make Him Into The Latter; And The Latter So That By The Time He Is Halfway Through The Book, He Will Invite Himself Into The Former.

Elementary Number Theory Oct 03 2022 Elementary Number Theory, Seventh Edition, is written for the one-semester undergraduate number theory course taken by math majors, secondary education majors, and computer science students. This contemporary text provides a simple account of classical number theory, set against a historical background that shows the subject's evolution from antiquity to recent research. Written in David Burton's engaging style, Elementary Number Theory reveals the attraction that has drawn leading mathematicians and amateurs alike to number theory over the course of history.

Basic Structures of Function Field Arithmetic Jan 14 2021 From the reviews: "The book...is a thorough and very readable introduction to the arithmetic of function fields of one variable over a finite field, by an author who has made fundamental contributions to the field. It serves as a definitive reference volume, as well as offering graduate students with a solid understanding of algebraic number theory the opportunity to quickly reach the frontiers of knowledge in an important area of mathematics...The arithmetic of function fields is a universe filled with beautiful surprises, in which familiar objects from classical number theory reappear in new guises, and in which entirely new objects play important roles. Goss' clear exposition and lively style make this book an excellent introduction to this fascinating field." MR 97i:11062