The Rogers Ramanujan Continued Fraction And A New

Srinivasa Ramanujan is, arguably, the greatest mathematician that India has produced. His story is quite unusual: although he had no formal education inmathematics, he taught himself, and managed to produce many important new results. With the support of the English number theorist G. H. Hardy, Ramanujan received a

scholarship to go to England and study mathematics. He died very young, at the age of 32, leaving behind three notebooks containing almost 3000 theorems, virtually all without proof. G. H. Hardy and others strongly urged that notebooks be edited and published, and the result is this series of books. This volume dealswith Chapters 1-9 of Book II; each theorem is either proved, or a reference to a proof is given.

This book contains essays

on Ramanujan and his work that were written especially for this volume. It also includes important survey articles in areas influenced by Ramanujan's mathematics. Most of the articles in the book are nontechnical, but even those that are more technical contain substantial sections that will engage the general reader.

Steven Finch provides 136 essays, each devoted to a mathematical constant or a class of

constants, from the well known to the highly exotic. This book is helpful both to readers seeking information about a specific constant, and to readers who desire a panoramic view of all constants coming from a particular field, for example, combinatorial enumeration or geometric optimization. Unsolved problems appear virtually everywhere as well. This work represents an outstanding scholarly attempt to bring together all significant

mathematical constants in one place.
The so-called Lost Notebook of S.R. Ramanujan was brought to light in 1976 as part of the Watson bequest, by G.E. Andrews with whose introduction this collection of unpublished manuscripts opens. A major portion of the Lost Notebook - really just 90 unpaginated sheets of work on q-series and other topics - is reproduced here in facsimile. Letters from Ramanujan to Hardy as

well as various other sheets of seemingly related notes are then included, on topics including coefficients in the 1/q3 and 1/q2 problems and the mock theta functions. The next 180 pages consist of unpublished manuscripts of Ramanujan, including 28 pages from the 'Loose Papers` held in the Trinity College Library. Finally a number of interesting letters that were exchanged between Ramanujan, Littlewood, Hardy and Watson, with a

bearing on Ramanujan's work are collected together here with other extracts and fragments.

A Personal Journey

Ramanujan's Lost Notebook

On Diophantine Approximations of the Rogers-Ramanujan Continued Fraction

Collected Papers of Srinivasa Ramanujan

Ramanujan's Theta Functions

Continued Fractions

Provides a wide ranging introduction to partitions, accessible to any reader familiar

with polynomials and infinite series. The aim of these lecture notes is to provide a self-contained exposition of several fascinating formulas discovered by Srinivasa Ramanujan. Two central results in these notes are: (1) the evaluation of the Rogers–Ramanujan continued fraction — a result that convinced G H Hardy that Ramanujan was a "mathematician of the highest class", and (2) what G. H. Hardy called Ramanujan's "Most Beautiful Identity". This book covers a range of related results, such as several proofs of the famous Rogers–Ramanujan identities and a detailed account of Ramanujan's congruences. It also covers a range of techniques in q-series. Contents:Jacob's Triple Product IdentityThe Rogers-

Ramanujan IdentitiesThe rogers-Ramanujan continued FractionFrom the "Most Beautiful Identity" to Ramanujan's Congruences Readership: Graduate students and researchers in number theory. Keywords:Rogersâ??Ramanujan Continued Fraction;Rogersâ??Ramanujan Identities;Ramanujan's â??Most Beautiful Identityâ??;Ramanujan CongruencesReviews: "A great strength of this book is that almost every major result is proven in several different ways, illustrating the breadth of approaches to q-series … This book is well written with results that are well motivated and clearly explained. It is an excellent and statisfying introduction to q-series." Mathematical Reviews

This volume explores the connections between mathematical modeling, computational methods, and high performance computing, and how recent developments in these areas can help to solve complex problems in the natural sciences and engineering. The content of the book is based on talks and papers presented at the conference Modern Mathematical Methods and High Performance Computing in Science & Technology (M3HPCST), held at Inderprastha Engineering College in Ghaziabad, India in January 2020. A wide range of both theoretical and applied topics are covered in detail, including the conceptualization of infinity, efficient domain decomposition, high capacity wireless communication, infectious

disease modeling, and more. These chapters are organized around the following areas: Partial and ordinary differential equations Optimization and optimal control High performance and scientific computing Stochastic models and statistics Recent Trends in Mathematical Modeling and High Performance Computing will be of interest to researchers in both mathematics and engineering, as well as to practitioners who face complex models and extensive computations.

The letters that Ramanujan wrote to G. H. Hardy on January 16 and February 27, 1913, are two of the most famous letters in the history of mathematics. These and other letters introduced Ramanujan and his remarkable theorems to the

world and stimulated much research, especially in the 1920s and 1930s. This book brings together many letters to, from, and about Ramanujan. The letters came from the National Archives in Delhi, the Archives in the State of Tamil Nadu, and a variety of other sources. Helping to orient the reader is the extensive commentary, both mathematical and cultural, by Berndt and Rankin; in particular, they discuss in detail the history, up to the present day, of each mathematical result in the letters. Containing many letters that have never been published before, this book will appeal to those interested in Ramanujan's mathematics as well as those wanting to learn more about the personal side of his life.

Ramanujan: Letters and Commentary was selected for the CHOICE list of Outstanding Academic Books for 1996.
Visual Complex Functions
Part I
The Rogers-Ramanujan Continued Fraction and a Certain Quotient of Eta Functions Found in Ramanujan's Lost Notebook
An Invitation to the Rogers-Ramanujan Identities
Essays and Surveys
Introduction to the Theory of Numbers

One of the most authoritative and comprehensive books on the subject of continued fractions, this monograph has been widely used by

generations of mathematicians and their students. Dr. Hubert Stanley Wall presents a unified theory correlating certain parts and applications of the subject within a larger analytic structure. Prerequisites include a first course in function theory and knowledge of the elementary properties of linear transformations in the complex plane. Some background in number theory, real analysis, and complex analysis may also prove helpful. The two-part treatment begins with an

exploration of convergence theory, addressing continued fractions as products of linear fractional transformations, convergence theorems, and the theory of positive definite continued fractions, as well as other topics. The second part, focusing on function theory, covers the theory of equations, matrix theory of continued fractions, bounded analytic functions, and many additional subjects.

Originally published in 1927, this book presents the collected papers of the

renowned Indian mathematician Srinivasa Ramanujan (1887-1920), with editorial contributions from G. H. Hardy (1877-1947). Detailed notes are incorporated throughout and appendices are also included. This book will be of value to anyone with an interest in the works of Ramanujan and the history of mathematics. The discovery of infinite products by Wallis and infinite series by Newton marked the beginning of the modern mathematical era. It allowed Newton to solve the problem of finding

areas under curves defined by algebraic equations, an achievement beyond the scope of the earlier methods of Torricelli, Fermat and Pascal. While Newton and his contemporaries, including Leibniz and the Bernoullis, concentrated on mathematical analysis and physics, Euler's prodigious accomplishments demonstrated that series and products could also address problems in algebra, combinatorics and number theory. In this book, Ranjan Roy describes many facets of the

discovery and use of infinite series and products as worked out by their originators, including mathematicians from Asia, Europe and America. The text provides context and motivation for these discoveries, with many detailed proofs, offering a valuable perspective on modern mathematics. Mathematicians, mathematics students, physicists and engineers will all read this book with benefit and enjoyment. This unique book provides an innovative and efficient approach to elliptic

functions, based on the ideas of the great Indian mathematician Srinivasa Ramanujan. The original 1988 monograph of K Venkatachaliengar has been completely revised. Many details, omitted from the original version, have been included, and the book has been made comprehensive by notes at the end of each chapter. The book is for graduate students and researchers in Number Theory and Classical Analysis, as well for scholars and aficionados of Ramanujan's work. It can be read by anyone with

some undergraduate knowledge of real and complex analysis.

Get Smart!

Continued Fraction, Pell's Equation, Mathematical Constants, Möbius Transformation, Generalized Continued Fraction, Incomplete Ga

M3HPCST-2020, Ghaziabad, India, January 9-11, 2020

Ramanujan's Notebooks

Ramanujan

Introduction to the Arithmetic Theory of Automorphic Functions

The theory of automorphic forms is playing increasingly important roles in several branches of

mathematics, even in physics, and is almost ubiquitous in number theory. This book introduces the reader to the subject and in particular to elliptic modular forms with emphasis on their number-theoretical aspects. After two chapters geared toward elementary levels, there follows a detailed treatment of the theory of Hecke operators, which associate zeta functions to modular forms. At a more advanced level, complex multiplication of elliptic curves and abelian varieties is discussed. The main question is the construction of abelian extensions of certain algebraic

number fields, which is traditionally called "Hilbert's twelfth problem." Another advanced topic is the determination of the zeta function of an algebraic curve uniformized by modular functions, which supplies an indispensable background for the recent proof of Fermat's last theorem by Wiles.

Another excellent book long out of print but much in demand. This book is pulled together by Ramanujan's primary mentor, G. H. Hardy, who was the first to recognize the amazing nature of Ramanujan's ideas. Another exceptional classic from the

Chelsea list.
This volume contains the proceedings of an international conference to commemorate the 125th anniversary of Ramanujan's birth, held from November 5-7, 2012, at the University of Florida, Gainesville, Florida. Srinivasa Ramanujan was India's most famous mathematician. This volume contains research and survey papers describing recent and current developments in the areas of mathematics influenced by Ramanujan. The topics covered include modular forms, mock theta functions and harmonic Maass forms,

continued fractions, partition inequalities, -series, representations of affine Lie algebras and partition identities, highly composite numbers, analytic number theory and quadratic forms.

The Rogers--Ramanujan identities are a pair of infinite series–infinite product identities that were first discovered in 1894. Over the past several decades these identities, and identities of similar type, have found applications in number theory, combinatorics, Lie algebra and vertex operator algebra theory, physics (especially statistical

mechanics), and computer science (especially algorithmic proof theory). Presented in a coherant and clear way, this will be the first book entirely devoted to the Rogers–Ramanujan identities and will include related historical material that is unavailable elsewhere.

Sources in the Development of Mathematics

Ramanujan's Place in the World of Mathematics

Number Theory in the Spirit of Ramanujan

Recent Trends in Mathematical Modeling and High Performance Computing

The Power of Q

Series and Products from the Fifteenth to the Twenty-first Century

Sir Arthur Conan Doyle's famous fictional detective Sherlock Holmes and his sidekick Dr. Watson go camping and pitch their tent under the stars. During the night, Holmes wakes his companion and says, ""Watson, look up at the stars and tell me what you deduce."" Watson says, ""I see millions of stars, and it is quite likely that a few of them are planets just like Earth. Therefore there may also be life on these

planets."" Holmes replies, ""Watson, you idiot. Somebody stole our tent."" When seeking proofs of Ramanujan's identities for the Rogers-Ramanujan functions, Watson, i.e., G. N. Watson, was not an ""idiot."" He, L. J. Rogers, and D. M. Bressoud found proofs for several of the identities. A. J. F. Biagioli devised proofs for most (but not all) of the remaining identities. Although some of the proofs of Watson, Rogers, and Bressoud are likely in the spirit of those found by Ramanujan, those of Biagioli

are not. In particular, Biagioli used the theory of modular forms. Haunted by the fact that little progress has been made into Ramanujan's insights on these identities in the past 85 years, the present authors sought ""more natural"" proofs. Thus, instead of a missing tent, we have had missing proofs, i.e., Ramanujan's missing proofs of his forty identities for the Rogers-Ramanujan functions. In this paper, for 35 of the 40 identities, the authors offer proofs that are in the spirit of Ramanujan.

Some of the proofs presented here are due to Watson, Rogers, and Bressoud, but most are new. Moreover, for several identities, the authors present two or three proofs. For the five identities that they are unable to prove, they provide non-rigorous verifications based on an asymptotic analysis of the associated Rogers-Ramanujan functions. This method, which is related to the 5-dissection of the generating function for cranks found in Ramanujan's lost notebook, is what

Ramanujan might have used to discover several of the more difficult identities. Some of the new methods in this paper can be employed to establish new identities for the Rogers-Ramanujan functions.

In the library at Trinity College, Cambridge in 1976, George Andrews of Pennsylvania State University discovered a sheaf of pages in the handwriting of Srinivasa Ramanujan. Soon designated as "Ramanujan's Lost Notebook," it contains considerable material on

mock theta functions and undoubtedly dates from the last year of Ramanujan's life. In this book, the notebook is presented with additional material and expert commentary.
The First Edition of the book is a collection of articles, all by the author, on the Indian mathematical genius Srinivasa Ramanujan as well as on some of the greatest mathematicians in history whose life and works have things in common with Ramanujan. It presents a unique comparative study of Ramanujan's spectacular

discoveries and remarkable life with the monumental contributions of various mathematical luminaries, some of whom, like Ramanujan, overcame great difficulties in life. Also, among the articles are reviews of three important books on Ramanujan's mathematics and life. In addition, some aspects of Ramanujan's contributions, such as his remarkable formulae for the number pi, his path-breaking work in the theory of partitions, and his fundamental observations on quadratic

forms, are discussed. Finally, the book describes various current efforts to ensure that the legacy of Ramanujan will be preserved and continue to thrive in the future. This Second Edition is an expanded version of the first with six more articles by the author. Of note is the inclusion of a detailed review of the movie The Man Who Knew Infinity, a description of the fundamental work of the SASTRA Ramanujan Prize Winners, and an account of the Royal Society

Conference to honour Ramanujan's legacy on the centenary of his election as FRS.

This unique book explores the world of q, known technically as basic hypergeometric series, and represents the author's personal and life-long study—inspired by Ramanujan—of aspects of this broad topic. While the level of mathematical sophistication is graduated, the book is designed to appeal to advanced undergraduates as well as researchers in the field. The

principal aims are to demonstrate the power of the methods and the beauty of the results. The book contains novel proofs of many results in the theory of partitions and the theory of representations, as well as associated identities. Though not specifically designed as a textbook, parts of it may be presented in course work; it has many suitable exercises. After an introductory chapter, the power of q-series is demonstrated with proofs of Lagrange's four-squares theorem and Gauss's two-

squares theorem. Attention then turns to partitions and Ramanujan's partition congruences. Several proofs of these are given throughout the book. Many chapters are devoted to related and other associated topics. One highlight is a simple proof of an identity of Jacobi with application to string theory. On the way, we come across the Rogers–Ramanujan identities and the Rogers–Ramanujan continued fraction, the famous "forty identities" of Ramanujan, and the

representation results of Jacobi, Dirichlet and Lorenz, not to mention many other interesting and beautiful results. We also meet a challenge of D.H. Lehmer to give a formula for the number of partitions of a number into four squares, prove a "mysterious" partition theorem of H. Farkas and prove a conjecture of R.Wm. Gosper "which even Erdős couldn't do." The book concludes with a look at Ramanujan's remarkable tau function.
Generalizations of Certain Results on Continued

Fraction

Ramanujan's Forty Identities for the Rogers-Ramanujan Functions

Mathematical Constants

Letters and Commentary

On the Convergence and Divergence of Q Continued Fractions on and Off the Unit Circle

Singular Values of the Rogers-Ramanujan Continued Fraction

This volume presents the contributions from the international conference held at the University of Missouri at Columbia, marking Professor Lange's 70th birthday and his retirement from the university. The principal purpose of

the conference was to focus on continued fractions as a common interdisciplinary theme bridging gaps between a large number of fields - from pure mathematics to mathematical physics and approximation theory. Evident in this work is the widespread influence of continued fractions in a broad range of areas of mathematics and physics, including number theory, elliptic functions, Pade approximations, orthogonal polynomials, moment problems, frequency analysis, and regularity properties of evolution equations. Different areas of current research are represented. The lectures at the conference and the contributions to this volume reflect the wide range of applicability of continued fractions in mathematics and the applied sciences.

Theta functions were studied extensively by Ramanujan. This book provides a systematic development of Ramanujan's results and extends them to a general theory. The author's treatment of the subject is comprehensive, providing a detailed study of theta functions and modular forms for levels up to 12. Aimed at advanced undergraduates, graduate students, and researchers, the organization, user-friendly presentation, and rich source of examples, lends this book to serve as a useful reference, a pedagogical tool, and a stimulus for further research. Topics, especially those discussed in the second half of the book, have been the subject of much recent research; many of which are appearing in book form

for the first time. Further results are summarized in the numerous exercises at the end of each chapter.

This unique book explores the world of q, known technically as basic hypergeometric series, and represents the author's personal and life-long study--inspired by Ramanujan--of aspects of this broad topic. While the level of mathematical sophistication is graduated, the book is designed to appeal to advanced undergraduates as well as researchers in the field. The principal aims are to demonstrate the power of the methods and the beauty of the results. The book contains novel proofs of many results in the theory of partitions and the theory of representations, as well as associated identities. Though not specifically

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Get Smart! is the new mantra for students. With a systematic, back-to-the-basics approach, the books in this series aim to help students tackle crucial subjects in school with confidence and enjoyment. Accompanied by tables, illustrations and many exciting exercises, the Get Smart! series gives

helpful tips and sensible advice so that students can develop both creative and analytical skills. Get Smart! Study Smarter is a unique guide for students that illustrates the best methods to adopt while doing school work. It examines various aspects of learning and gives practical suggestions on how to: · Manage your study time better · Understand and learn your lessons efficiently using methods like SQ3R · Enhance your memory with memory aids like Acronyms, Acrostics, Rhymes, Associations · Prepare for exams And for those who feel that life is all about books and lessons, Study Smarter gives ideas on what to do to unwind in the spare hours! Filled with helpful examples, study plans, timetables and charts, and packed with exciting trivia,

this book aims to help students lead a well rounded school life. Age group of target audience (Puffin): 12+

Development of Elliptic Functions According to Ramanujan

Analytic Theory of Continued Fractions

Maths Concepts

Theta Functions and Q-series

Ramanujan: Essays and Surveys

The Lost Notebook and Other Unpublished Papers

Singular Values of the Rogers-Ramanujan Continued FractionOn Diophantine Approximations of the Rogers-Ramanujan Continued FractionThe Continued Fractions Found in the Unorganized Portions of Ramanujan's NotebooksAmerican Mathematical

Soc.

This book provides a systematic introduction to functions of one complex variable. Its novel feature is the consistent use of special color representations – so-called phase portraits – which visualize functions as images on their domains. Reading Visual Complex Functions requires no prerequisites except some basic knowledge of real calculus and plane geometry. The text is self-contained and covers all the main topics usually treated in a first course on complex analysis. With separate chapters on various construction principles, conformal mappings and Riemann surfaces it goes somewhat beyond a standard programme and leads

the reader to more advanced themes. In a second storyline, running parallel to the course outlined above, one learns how properties of complex functions are reflected in and can be read off from phase portraits. The book contains more than 200 of these pictorial representations which endow individual faces to analytic functions. Phase portraits enhance the intuitive understanding of concepts in complex analysis and are expected to be useful tools for anybody working with special functions – even experienced researchers may be inspired by the pictures to new and challenging questions. Visual Complex Functions may also serve as a

companion to other texts or as a reference work for advanced readers who wish to know more about phase portraits.

Please note that the content of this book primarily consists of articles available from Wikipedia or other free sources online. Pages: 50. Chapters: Continued fraction, Pell's equation, Mathematical constants, Mobius transformation, Generalized continued fraction, Incomplete gamma function, Gauss's continued fraction, Pade table, Stern-Brocot tree, Silver ratio, Minkowski's question mark function, Solving quadratic equations with continued fractions, Convergence problem, Periodic continued fraction, Khinchin's constant, Gauss-Kuzmin-

Wirsing operator, Pade approximant, Engel expansion, Euler's continued fraction formula, Complete quotient, Restricted partial quotients, Rogers-Ramanujan continued fraction, Gauss-Kuzmin distribution, Convergent, Stieltjes transformation, Fundamental recurrence formulas, Chain sequence, Levy's constant, Lochs' theorem.

The book provides a comprehensive introduction to the many aspects of the subject of basic hypergeometric series. The book essentially assumes no prior knowledge but eventually provides a comprehensive introduction to many important topics. After

developing a treatment of historically important topics such as the q-binomial theorem, Heine's transformation, the Jacobi triple product identity, Ramanujan's 1-psi-1 summation formula, Bailey's 6-psi-6 summation formula and the Rogers-Fine identity, the book goes on to delve more deeply into important topics such as Bailey- and WP-Bailey pairs and chains, q-continued fractions, and mock theta functions. There are also chapters on other topics such as Lambert series and combinatorial proofs of basic hypergeometric identities. The book could serve as a textbook for the subject at the graduate level and as a textbook for a topic course at the undergraduate level (earlier

chapters). It could also serve as a reference work for researchers in the area.

An Invitation to Q-Series

History of Continued Fractions and Padé Approximants

Ramanujan 125

Twelve Lectures on Subjects Suggested by His Life and Work

Essays Providing a Comparative Study

Among his thirty-three published papers, Ramanujan had only one continued fraction, the Rogers-Ramanujan continued fraction. However, his notebooks contain over 100 results on continued fractions. At the end of his

second notebook are 100 pages of unorganized material, and the third notebook comprises thirty-three pages of disorganized results. In these 133 pages of material are approximately sixty theorems on continued fractions, most of them new results. In this monograph, the authors discuss and prove each of these theorems. Aimed at those interested in Ramanujan and his work, this monograph will be of special interest to those who work in continued fractions, q-series, special functions, theta-functions, and combinatorics. The work is likely to be of interest

to those in number theory as well. The only required background is some knowledge of continued fractions and a course in complex analysis. The history of continued fractions is certainly one of the longest among those of mathematical concepts, since it begins with Euclid's algorithm for the great est common divisor at least three centuries B.C. As it is often the case and like Monsieur Jourdain in Moliere's "Ie bourgeois gentilhomme" (who was speak ing in prose though he did not know he was doing so), continued fractions were used for many centuries before their real discovery.

The history of continued fractions and Pade approximants is also quite im portant, since they played a leading role in the development of some branches of mathematics. For example, they were the basis for the proof of the tran scendence of 11' in 1882, an open problem for more than two thousand years, and also for our modern spectral theory of operators. Actually they still are of great interest in many fields of pure and applied mathematics and in numerical analysis, where they provide computer approximations to special functions and are connected to some convergence

acceleration methods. Con tinued fractions are also used in number theory, computer science, automata, electronics, etc ... Various topics related to the work of Ramanujan are discussed in this thesis. In Chapter 2, we give a new proof of Ramanujan's famous partition identity modulo 5 (see (1.1)). This proof is an improvement of W. N. Bailey's proof given in 1952. We also establish a new proof of Ramanujan's partition identity modulo 7. One remarkable feature of Ramanujan's identities is that many of them appear in pairs. In Chapter 3, we explain this interesting

phenomenon using Hecke's theory of correspondence between Fourier series and Dirichlet series. Chapters 4 and 5 are devoted to the evaluations of Ramanujan-Weber class invariants. We establish 18 of these invariants which have not heretofore been proven. Our proofs rely heavily on the knowledge of modular equations and class field theory. In Chapter 6, we study Ramanujan's cubic continued fraction G(q) (see (1.7)) and construct relations between various continued fractions. We also use the results of Chapter 4 to give explicit evaluations of G(q) at $q=pm

esp{-pisqrt{n}}$. Undoubtedly, one of Ramanujan's favorite topics is the Rogers-Ramanujan continued fraction F(q) (see (1.6)). In Chapter 7, using modular equations of degrees 5 and 25, we establish theorems which enable us to evaluate F(q) at $q=esp{-2}pisqrt{n}$ and $-esp{-pisqrt{n}}$. In particular, we are able to complete a table initiated by Ramanujan on page 210 of his Lost Notebook. In his first notebook, Ramanujan recorded several values of the classical theta function $varphi(q)$ (see (2.1.7)). In our final chapter, we give natural proofs of these

values using modular equations of various degrees. We also discover a new identity which is related to the Borweins' cubic theta functions. Ramanujan is recognized as one of the great number theorists of the twentieth century. Here now is the first book to provide an introduction to his work in number theory. Most of Ramanujan's work in number theory arose out of q-series and theta functions. This book provides an introduction to these two important subjects and to some of the topics in number theory that are inextricably intertwined

with them, including the theory of partitions, sums of squares and triangular numbers, and the Ramanujan tau function. The majority of the results discussed here are originally due to Ramanujan or were rediscovered by him. Ramanujan did not leave us proofs of the thousands of theorems he recorded in his notebooks, and so it cannot be claimed that many of the proofs given in this book are those found by Ramanujan. However, they are all in the spirit of his mathematics.The subjects examined in this book have a rich history dating back to Euler and Jacobi, and they

continue to be focal points of contemporary mathematical research. Therefore, at the end of each of the seven chapters, Berndt discusses the results established in the chapter and places them in both historical and contemporary contexts. The book is suitable for advanced undergraduates and beginning graduate students interested in number theory.

An Introduction with Phase Portraits

Topics and Methods in q-Series

Notebooks of Srinivasa Ramanujan

Integer Partitions

The Power of q

The Continued Fractions

Found in the Unorganized Portions of Ramanujan's Notebooks