



Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century

By Ranjan Roy

Download now

Read Online 

Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy

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. 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. Series and products have continued to be pivotal mathematical tools in the work of Gauss, Abel, and Jacobi in elliptic functions; in Boole's and Lagrange's infinite series and products of operators; in work by Cayley, Sylvester, and Hilbert in invariant theory; and in the present-day conjectures of Langlands, including that of Shimura-Taniyama, leading to Wiles's proof of Fermat's last theorem. 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; the original notation and diagrams are presented when practical. Multiple derivations are given for many results, and detailed proofs are offered for important theorems and formulas. Each chapter includes interesting exercises and bibliographic notes, supplementing the results of the chapter. These original mathematical insights offer a valuable perspective on modern mathematics. Mathematicians, mathematics students, physicists, and engineers will all read this book with benefit and enjoyment.

 [Download Sources in the Development of Mathematics: Series ...pdf](#)

 [Read Online Sources in the Development of Mathematics: Serie ...pdf](#)

Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century

By Ranjan Roy

Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy

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. 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. Series and products have continued to be pivotal mathematical tools in the work of Gauss, Abel, and Jacobi in elliptic functions; in Boole's and Lagrange's infinite series and products of operators; in work by Cayley, Sylvester, and Hilbert in invariant theory; and in the present-day conjectures of Langlands, including that of Shimura-Taniyama, leading to Wiles's proof of Fermat's last theorem. 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; the original notation and diagrams are presented when practical. Multiple derivations are given for many results, and detailed proofs are offered for important theorems and formulas. Each chapter includes interesting exercises and bibliographic notes, supplementing the results of the chapter. These original mathematical insights offer a valuable perspective on modern mathematics. Mathematicians, mathematics students, physicists, and engineers will all read this book with benefit and enjoyment.

Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy **Bibliography**

- Sales Rank: #2604946 in Books
- Published on: 2011-06-13
- Original language: English
- Number of items: 1
- Dimensions: 9.96" h x 1.97" w x 8.46" l, 4.15 pounds
- Binding: Hardcover
- 994 pages



[Download Sources in the Development of Mathematics: Series ...pdf](#)



[Read Online Sources in the Development of Mathematics: Serie ...pdf](#)

Download and Read Free Online Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy

Editorial Review

Review

"This work is unbelievably thorough. Roy includes not just results but also many proofs, historic contexts, references, and exercises. Is it the sort of encyclopedic effort that one typically associates with a group of authors rather than an individual. Roy has made an important contribution with this book."

C. Bauer, Choice Magazine

"... will provide [Roy] unique recognition for deep scholarship and extraordinary exposition regarding the history of classical mathematical analysis and related algebraic topics. This well-written book will be a valuable source of fresh information on the wide range of topics covered. It can be expected to have great positive impact on pedagogy and understanding. It certainly seems to be the best one-volume history of mathematics I know..."

Robert E. O'Malley, SIAM Review

"I recommend this book to a wide audience. Undergraduates can learn of the truly vast amount of material that lies alongside some of their more standard endeavors, many of which involve only elementary matters: sums, products, limits, calculus. Graduate students and nonspecialist faculty can wonder at the ingenuity of their predecessors and the connections between now disparate areas that are afforded by this very classical view. They'll also get lots of good ideas for teaching (and they may waste a good deal of time on the problems, as well). Historians, philosophers, and others should read this book, if only for the view of mathematics it propounds. And specialized researchers in the area of special functions and related fields should simply have a good time. All of these readers can benefit from the remarkable expository talents of the author and his careful choice of material. Among personal views of mathematics that use history as a key to understanding, Roy's book stands out as a model."

Tom Archibald, Notices of the AMS

About the Author

Ranjan Roy is the Ralph C. Huffer Professor of Mathematics and Astronomy at Beloit College. Roy has published papers and reviews in differential equations, fluid mechanics, Kleinian groups, and the development of mathematics. He co-authored Special Functions (2001) with George Andrews and Richard Askey, and authored chapters in the NIST Handbook of Mathematical Functions (2010). He has received the Allendoerfer prize, the Wisconsin MAA teaching award, and the MAA Haimo award for distinguished mathematics teaching.

Users Review

From reader reviews:

Susan Velez:

A lot of people always spent their free time to vacation or go to the outside with them household or their friend. Were you aware? Many a lot of people spent that they free time just watching TV, or maybe playing video games all day long. If you would like try to find a new activity that is look different you can read the book. It is really fun for you personally. If you enjoy the book that you simply read you can spent the entire day to reading a guide. The book Sources in the Development of Mathematics: Series and Products from the

Fifteenth to the Twenty-first Century it is extremely good to read. There are a lot of those who recommended this book. We were holding enjoying reading this book. Should you did not have enough space to deliver this book you can buy typically the e-book. You can more easily to read this book through your smart phone. The price is not very costly but this book has high quality.

Marcus Leiva:

Don't be worry should you be afraid that this book will filled the space in your house, you may have it in e-book means, more simple and reachable. That Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century can give you a lot of close friends because by you considering this one book you have matter that they don't and make a person more like an interesting person. This specific book can be one of one step for you to get success. This reserve offer you information that possibly your friend doesn't learn, by knowing more than other make you to be great individuals. So , why hesitate? Let's have Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century.

Cesar Ford:

A lot of publication has printed but it takes a different approach. You can get it by online on social media. You can choose the top book for you, science, comedian, novel, or whatever simply by searching from it. It is known as of book Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century. You can include your knowledge by it. Without leaving the printed book, it could possibly add your knowledge and make you actually happier to read. It is most critical that, you must aware about publication. It can bring you from one place to other place.

Jennifer Klein:

Reading a book make you to get more knowledge from this. You can take knowledge and information from your book. Book is created or printed or illustrated from each source that filled update of news. With this modern era like at this point, many ways to get information are available for an individual. From media social such as newspaper, magazines, science reserve, encyclopedia, reference book, story and comic. You can add your understanding by that book. Are you hip to spend your spare time to open your book? Or just in search of the Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century when you needed it?

Download and Read Online Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy #HUVS346FD1N

Read Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy for online ebook

Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy books to read online.

Online Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy ebook PDF download

Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy Doc

Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy MobiPocket

Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy EPub

HUVS346FD1N: Sources in the Development of Mathematics: Series and Products from the Fifteenth to the Twenty-first Century By Ranjan Roy