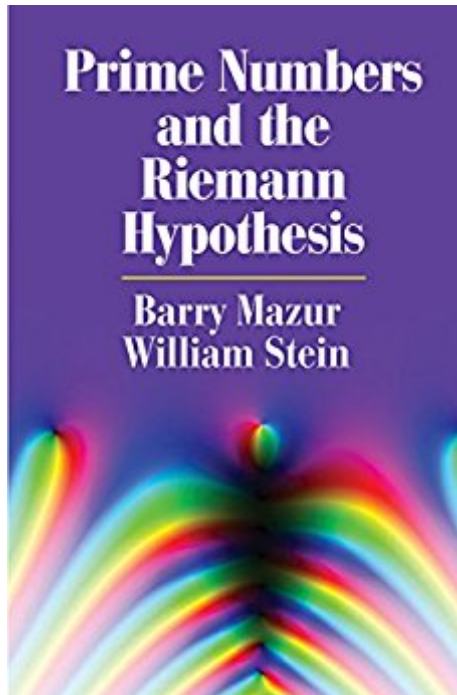


The book was found

Prime Numbers And The Riemann Hypothesis



Synopsis

Prime numbers are beautiful, mysterious, and beguiling mathematical objects. The mathematician Bernhard Riemann made a celebrated conjecture about primes in 1859, the so-called Riemann hypothesis, which remains one of the most important unsolved problems in mathematics. Through the deep insights of the authors, this book introduces primes and explains the Riemann hypothesis. Students with a minimal mathematical background and scholars alike will enjoy this comprehensive discussion of primes. The first part of the book will inspire the curiosity of a general reader with an accessible explanation of the key ideas. The exposition of these ideas is generously illuminated by computational graphics that exhibit the key concepts and phenomena in enticing detail. Readers with more mathematical experience will then go deeper into the structure of primes and see how the Riemann hypothesis relates to Fourier analysis using the vocabulary of spectra. Readers with a strong mathematical background will be able to connect these ideas to historical formulations of the Riemann hypothesis.

Book Information

File Size: 4472 KB

Print Length: 150 pages

Simultaneous Device Usage: Up to 4 simultaneous devices, per publisher limits

Publisher: Cambridge University Press; 1 edition (November 30, 2015)

Publication Date: March 22, 2016

Sold by:Â Digital Services LLC

Language: English

ASIN: B017205EKG

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #47,517 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #1 inÂ Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Pure Mathematics > Number Theory
#6 inÂ Books > Science & Math > Mathematics > Pure Mathematics > Number Theory #36 inÂ Books > Science & Math > Mathematics > History

Customer Reviews

A couple of books on the Riemann hypothesis have appeared for the general public: Derbyshire 2003, Du Sautoy 2003, Sabbagh 2003, Rockmore 2005, Watkins 2015, van der Veen and van der Craats 2015 and now Mazur-Stein 2016. More for mathematicians are Koblitz 1977, Edwards 2001, and Stopple 2003. From general expositions, one should also mention the paper of Conrey of 2003 which won the Conant prize for expository writing as well as a nice paper of Bombieri of 1992. Is this too much for the subject? No. A problem like the Riemann hypothesis can never be written too much about, especially if texts are written by experts. It is the open problems which drive mathematics. The Riemann hypothesis is the most urgent of all the open problems in math and like a good wine, the problem has become more valuable over time. What helped also is that since the time of Riemann, more and more connections with other fields of mathematics have emerged. The book of Veen-Craats and Mazur-Stein have emerged about at the same time. They are both small and well structured. Veen-Craats has been field tested with high school students and has focus mostly on the gorgeous Mangoldt explicit formula for the Chebychev prime distribution function, sometimes called the "music of the primes". Mazur-Stein do it similarly, however stress more on the Riemann spectrum and go didactically rather gently into the mathematics of Fourier theory as well as the theory of distributions. The book is carefully typeset, has color prints and some computer code for Sage. While Veen-Craats has many nice exercises, an exercise of Mazur-Stein led me to abandon other things for a couple of weeks, since it was so captivating. So be careful! A student who has taken basic calculus courses, should be able to read it.

The good: Use of many of numerical calculations and graphs to illustrate the ideas. Down to earth explanation of otherwise advanced concepts from pure math, e.g.: i) distributions (things which have integrals but aren't really the derivatives of any function); ii) zeroes of the Riemann zeta function in the so-called critical strip and how they relate to primes; iii) fourier analysis. The book is unusual (and should be praised) for attempting to explain serious maths to a wide audience (though there are others, e.g. Ash/Gross, Penrose, and Susskind/Friedman/Hrabovsky). Also some of the calculations appear to be genuinely novel (e.g. see Mumford's blog on this). Moreover unlike with many other popular science books, the authors are experts in the topic they're writing about. Finally the book is short and approachable. The bad: The book needed an editor. (It's not reasonable to just leave this to the authors, and their colleagues who would not receive remuneration for doing so and are otherwise busy). The authors frequently use the phrases such as "if you wish", "if you like", "if it can be called that". This only detracts from the writing, often forcing a re-read of a sentence. I don't blame the authors for this, as we all write like that, but an editor would pick that up. Occasionally

verbs appear where they ought not, e.g. on page 6 line -2 we get "there are two ways to begin to do this" when in fact it ought to be "there are two ways to do this" (there was at least one other example, and I'm being lazy in not finding it again). On page 131 the equals sign appears 3 times too often on lines 8, 10 and 11.

[Download to continue reading...](#)

Prime Numbers and the Riemann Hypothesis Prime: Learn Everything You Need To Know About The Prime Membership - Get The Most Out Of Instant Video, Music, Prime Shipping And The Kindle ... Prime Books, Prime Membership) Lending Library For Prime Members: Prime Members (lending library, prime members, free ebooks, tv series kindle owners) Prime Obsession: Bernhard Riemann and the Greatest Unsolved Problem in Mathematics Kindle Owners Lending Library: Get Free Books, Movies and TV Shows with your Kindle and Prime Membership (Kindle Owners Lending Library & Prime) Prime: What is Prime and Kindle Owners' Lending Library - How to Get the Most Out of It? Prime: What Is In It For Me? Learn How to get the most out of Prime Set Theory and the Continuum Hypothesis (Dover Books on Mathematics) Research on the Viral Hypothesis of Mental Disorders (Advances in Biological Psychiatry, Vol. 12) LOTTERY NUMBERS: 7 Numbers That WIN Most Often Riemann Solvers and Numerical Methods for Fluid Dynamics: A Practical Introduction Discontinuous Groups and Riemann Surfaces (AM-79): Proceedings of the 1973 Conference at the University of Maryland. (AM-79) (Annals of Mathematics Studies) Lectures on Riemann Surfaces: Jacobi Varieties (Princeton Legacy Library) Riemann Surfaces (Oxford Graduate Texts in Mathematics) The Theory of the Riemann Zeta-Function (Oxford Science Publications) Presidents, Prime Ministers, and Governors of the English-Speaking Caribbean and Puerto Rico: Conversations and Correspondence KINDLE: PRIME AND THE LENDING LIBRARY ...free movie download ...free tv series ...free books ...free shipping...and more ĩĹ The Theory and Practice of Innovation Policy: An International Research Handbook (PRIME Series on Research and Innovation Policy in Europe) Fire TV: The Best User Guide to Master Fire TV in 1 Hour (expert, Prime, tips and tricks, web services, home tv, digital media, echo) (user guides, internet) Echo: The Ultimate Guide to Echo and Hacking for Dummies (by echo, Alexa Kit, Prime, users guide, web services, digital media, ... (Web services, internet, hacking) (Volume 2)

[Dmca](#)