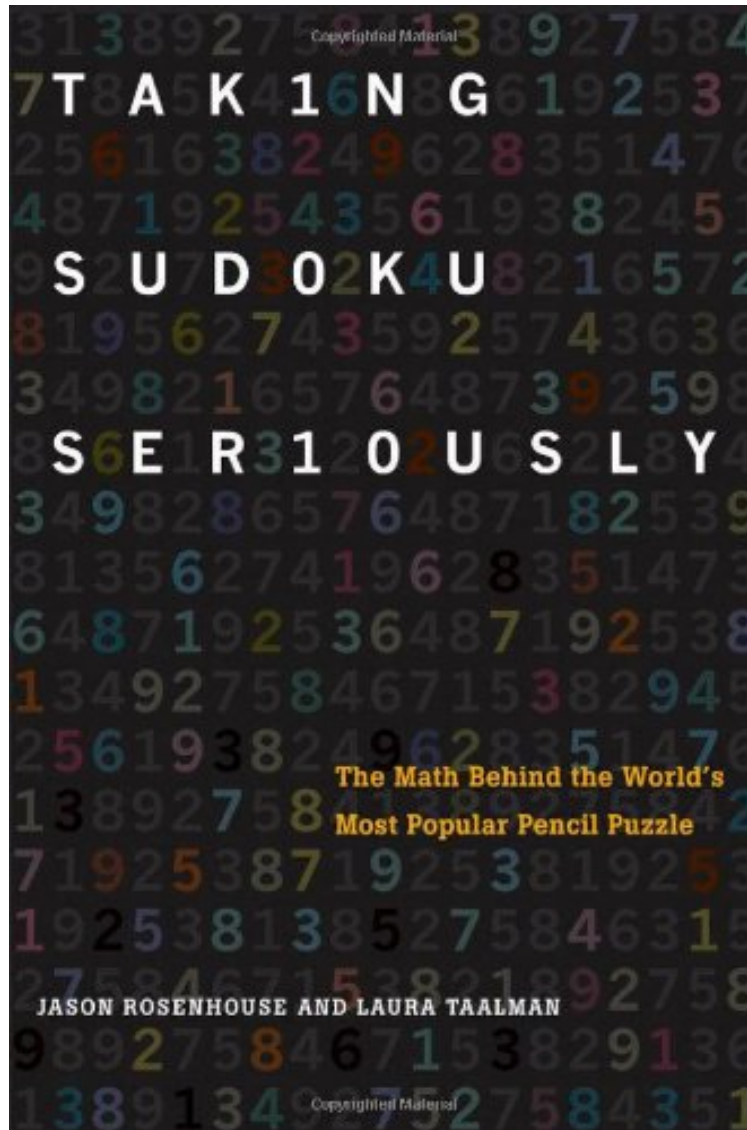


# Taking Sudoku Seriously: The Math Behind the World's Most Popular Pencil Puzzle

Jason Rosenhouse, Laura Taalman  
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#540653 in Books Oxford University Press, USA 2012-01-19 Original language: English PDF # 1 6.40 x .40 x 9.30l, 1.30 #File Name: 0199756562226 pages | File size: 58.Mb

**Jason Rosenhouse, Laura Taalman : Taking Sudoku Seriously: The Math Behind the World's Most Popular Pencil Puzzle** before purchasing it in order to gage whether or not it would be worth my time, and all praised Taking Sudoku Seriously: The Math Behind the World's Most Popular Pencil Puzzle:

4 of 4 people found the following review helpful. well written mathematical view of a popular puzzle By frankw The authors are college professors in mathematics who also have extensive experience with sudoku puzzles. In this book,

they cover a range of mathematical considerations from quite elementary to advanced, discussing sudoku puzzles from a number of different perspectives and drawing many interesting conclusions. In several cases, they analyze a smaller sudoku-like grid that uses entries only from 1-6 to simplify the math. Also enjoyable are a number of unsolved puzzles of various sorts, some quite unusual or advanced versions of the sudoku puzzles published in daily newspapers, etc. (with complete solutions provided at the end of the book). Anyone interested in the mathematical underpinnings of these ubiquitous puzzles will find this book a worthwhile read. 7 of 8 people found the following review helpful.

Really enjoyable introduction to the math of sudoku and related structures  
By A. Menon  
Having been playing too much Sudoku recently, I picked up this book to just read through and see if there were any relationships I was missing when trying to solve the puzzles. This book was not quite what I expected with a much broader discussion which focused on abstracting sudoku and discussing how it could be analyzed from a formal mathematical lens. Despite the content being a bit different than what I expected, I am really happy I picked it up as the contents are both interesting and motivating to the reader to consider a much larger set of puzzles and problems. The book starts out with discussing sudoku. It begins with taking more simple problems and through showing forced relationships in simple settings, is able to set the stage for understanding some forced relationships in sudoku squares. It goes through basic strategies and solution techniques. Soon after though the book starts getting into more abstract settings with fewer rules and more possibilities. It goes through various ways of looking at solutions to Sudoku and it looks at the similarities of various sudoku squares. For example rotations of sudoku squares are analyzed and are quite clearly solutions in themselves as are any sudoku square whose entries are all shifted by the same number (with any 0 going to 1). It discusses some group theory and some unsolved problems in Sudoku. This book discusses some Sudoku and more importantly discusses how Sudoku introduces many interesting mathematical problems. Some of these mathematical problems are what the book explores. The book definitely motivates the reader's ability to do some interesting math with a very concrete object and makes the learning process easier and more natural. Despite not being what I expected, I am really glad I picked this up. 0 of 0 people found the following review helpful. And I do! (take it seriously, that is)  
By Molly Johnson  
I really like the very interestingly designed Sudoku puzzles in this book. They are a new take on Sudoku and challenging but not so hard I can't do them. I have not read the whole book yet, but it does just what it claims, demonstrating the math behind the puzzle. I like these authors' other Sudoku puzzle books, too.

Packed with more than a hundred color illustrations and a wide variety of puzzles and brainteasers, *Taking Sudoku Seriously* uses this popular craze as the starting point for a fun-filled introduction to higher mathematics. How many Sudoku solution squares are there? What shapes other than three-by-three blocks can serve as acceptable Sudoku regions? What is the fewest number of starting clues a sound Sudoku puzzle can have? Does solving Sudoku require mathematics? Jason Rosenhouse and Laura Taalman show that answering these questions opens the door to a wealth of interesting mathematics. Indeed, they show that Sudoku puzzles and their variants are a gateway into mathematical thinking generally. Among many topics, the authors look at the notion of a Latin square--an object of long-standing interest to mathematicians--of which Sudoku squares are a special case; discuss how one finds interesting Sudoku puzzles; explore the connections between Sudoku, graph theory, and polynomials; and consider Sudoku extremes, including puzzles with the maximal number of vacant regions, with the minimal number of starting clues, and numerous others. The book concludes with a gallery of novel Sudoku variations--just pure solving fun! Most of the puzzles are original to this volume, and all solutions to the puzzles appear in the back of the book or in the text itself. A math book and a puzzle book, *Taking Sudoku Seriously* will change the way readers look at Sudoku and mathematics, serving both as an introduction to mathematics for puzzle fans and as an exploration of the intricacies of Sudoku for mathematics buffs.

"While accessibly written, this book will be best appreciated by readers with experience in graduate-level mathematics or research. Highly recommended for puzzle fanatics and those with an interest in mathematics." -- Elizabeth Brown, Binghamton Univ. Library Journal  
"Rosenhouse and Taalman successfully describe Sudoku from a research perspective; their descriptions and analysis of solving strategies are both clear and detailed, and their strategies for creating classic puzzles and variations are insightful. Highly recommended for puzzle fanatics and those with an interest in mathematics." -- Library Journal  
"Several insightful chapters describe how to generate good sudoku puzzles...Highly recommended."--CHOICE  
"The authors have produced a lovely addition to any budding or practiced mathematician's bookcase. Well-presented and readable for both the novice and the math expert, which is an admirable feat, this book is for anyone with an interest, no matter how vague or intense, in Sudoku." --  
Significance  
About the Author  
Jason Rosenhouse is Associate Professor of Mathematics at James Madison University and author of *The Monty Hall Problem: The Remarkable Story of Math's Most Contentious Brain Teaser*.  
Laura Taalman is Professor of Mathematics at James Madison University and co-founder of Brainfreeze Puzzles. She is the author of *Integrated Calculus* and co-author of three books of original Sudoku puzzles.