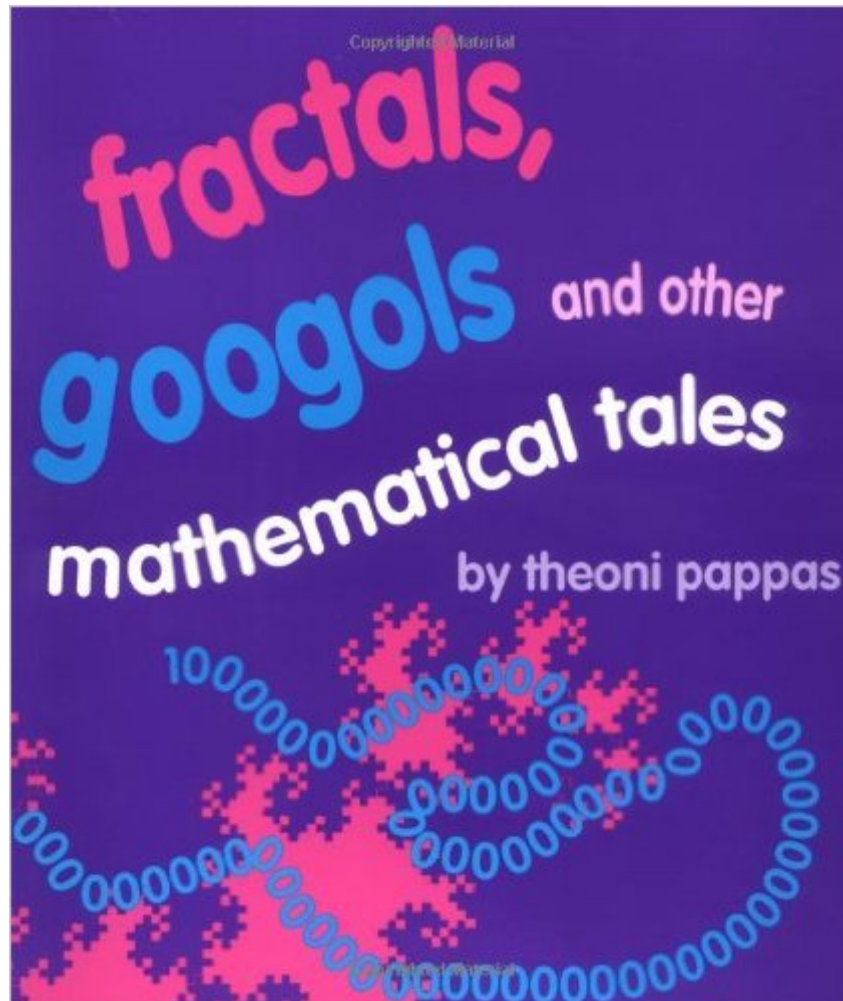


The book was found

Fractals, Googols, And Other Mathematical Tales



Synopsis

A treasure trove of stories that make mathematical ideas come to life. Explores math concepts and topics such as real numbers, exponents, dimensions, the golden rectangle in both serious and humorous ways. Stories such as the parable of p, the number line that fell apart, Leonhard the magic turtle and many others offer an amusing and entertaining way to explore and share mathematical ideas regardless of age or background. The reference section following each story is designed as enrichment information for the concepts presented in each story.

Book Information

Paperback: 72 pages

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Average Customer Review: 4.0 out of 5 stars [See all reviews](#) (19 customer reviews)

Best Sellers Rank: #335,128 in Books (See Top 100 in Books) #35 in [Books > Science & Math >](#)

[Mathematics > Pure Mathematics > Fractals](#) #72 in [Books > Science & Math > Mathematics >](#)

[Reference](#) #318 in [Books > Science & Math > Mathematics > History](#)

Age Range: 7 and up

Grade Level: 2 and up

Customer Reviews

I discovered this book in a homeschooling catalog (FunBooks.com). The good review in there enticed me to buy it for my then 6 year old, who is a voracious but difficult to please reader. He devoured it, loved it, and insisted that I read it too! The fascinating topics include decimals, magic squares, Fibonacci sequence, tangrams, the abacus, and much more. Some of the stories seem a little silly to me, but then that is probably the appeal for kids. :) This is one of those books that you must own rather than borrow from the library because it covers such a range of topics that your child (and you!) will want and need to refer back to it every so often. In fact, I will likely buy all the other books involving Penrose the Cat if they are as educational and fun as this book is.

This book explores a wide range of mathematical concepts, including many of the traditional "fun"

topics like Fibonacci numbers. For each topic (covered on two large pages typically) there is a simple story written to be accessible to even young children, followed by a franker and more mature mathematical discussion. This two part approach makes the text accessible to a wide audience while having a solid mathematical foundation. The articles serve as a solid foundation to spark student interest in further exploration, or stand alone as interesting mathematical shorts. Some of the topics will have direct curricular applications, including articles on the real number system and the transcendental number pi. This is a wonderful text and is suitable for elementary through high school students.

Theoni Pappas has written several books of mathematical 'tales' including the well-know Penrose books. "Fractals, Googols and other Mathematical Tales" includes a total of 22 topical tales. The table of contents helpfully includes information as to the topic discussed in that tale, as the chapter titles, 'Dr. Spacemath', for example, do not always indicate what the topic is! Unfortunately, if you already have the Penrose books, you will find that at least 9 of the chapters in "Fractals" are repeated from the Penrose books. Several of these have been condensed and it seems as though the author's commentary has been added to some in a purple side-bar in keeping with the style of the rest of the book. While the Penrose books are clearly written for and to those new to the world of mathematics, "Fractals" includes small-print, purple side-bars that seem to be written to a parent/teacher. As in the Penrose books, there is a section in the very back that includes solutions to puzzles and challenges posted in the book. We are big fans of the Penrose books and Theoni Pappas, and while 'Fractals' does indicate topics in the table of contents, I wish that all these books had a good index to make it easier to find tales and activities that are relevant to a student's current topic of study. I was also disappointed that so many of the tales in "Fractals" are repeats from the Penrose books. However, if you do not already have Penrose, this would be a great book to introduce you to Pappas' unique approach to mathematical tales.

This book tries to be two things: a guide to interesting areas of mathematics, and a playful children's book involving a cutesy cat character Penrose. It fails on both counts because it doesn't tie them together. The cat is just a transparent attempt to grab children's interest, and this heavy-handed gimmick fails miserably. The math is simply presented, having nothing to do with a coherent story. The result is ineffective and uninteresting. Contrast this with Malba Tahan's "The Man who Counted" and "The Number Devil." There is no comparison. I would love to see the concept in "The Man who Counted" taken much further, integrating higher mathematics into a real story. Unfortunately, this

isn't it.

This is a wonderful resource for math lovers! These stories work for reading to children of all ages, and creating a fresh new take on classic math concepts. A story on the endless loop of a Möbius strip, a tabby cat and the sounds of rustling papers, will give everyone listening a taste for the curiosity of a cat, without the negative ending! The authors also add a brief fact filled bit of history about the subject of the story. Humor and a light touch will have you saying "I did not know that!" You will want to read it all the way through before you put it down. Enjoy!

Amusing, entertaining. Math should be exciting and not boring textbook drills! Get creative, get exploring!

$C = \pi \cdot d$. That means the diameter has to be ****multiplied**** by "three and a little bit" in order to be equivalent to, or wrap around, the circumference of the circle. It takes "three and a little bit" diameters to get around the circle one time, not one diameter to get around the circle three and a little bit times. The engineer was right! Other than that, it was still a pretty good book, though. If you're a teacher with an older class, you can see if they can spot the error.

I read this book and really loved it! It puts mathematical concepts into a very useable form. It is a great book to use with kids and start discussions regarding mathematics.

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Mathematical Apocrypha: Stories and Anecdotes of Mathematicians and the Mathematical
(Spectrum) Handbook of Mathematical Functions: with Formulas, Graphs, and Mathematical Tables (Dover Books on Mathematics)
Elementary Cryptanalysis: A Mathematical Approach (Mathematical Association of America Textbooks)
Elementary Algebraic Geometry (Student Mathematical Library, Vol. 20) (Student Mathematical Library, V. 20)
A Course in Mathematical Modeling (Mathematical Association of America Textbooks)
The Mathematical Olympiad Handbook: An Introduction to Problem Solving Based on the First 32 British Mathematical Olympiads 1965-1996 (Oxford Science Publications)
Lecture Notes on Mathematical Olympiad Courses: For Junior Section (Mathematical Olympiad Series)
Transformation Groups for Beginners (Student Mathematical Library, Vol. 25) (Student Mathematical Library, V. 25)
Gaussian Self-Affinity and Fractals: Globality, The Earth, $1/f$ Noise, and R/S (Selected Works of Benoit B. Mandelbrot)
Adult Coloring Book: Fractals: curves and geometric

figures expertly programmed to help reduce stress, sharpen your concentration, and nourish your creativity
Cities and Complexity: Understanding Cities with Cellular Automata, Agent-Based Models, and Fractals (MIT Press)
Playing with Chaos: Programming Fractals and Strange Attractors in JavaScript
Chaos and Fractals: New Frontiers of Science Fractals Coloring Book: Over 60 Complex and Mind-Altering Images (Chartwell Coloring Books)
CHAOS, FRACTALS, AND DYNAMICS: COMPUTER EXPERIMENTS IN MODERN MATHEMATICS (DALE SEYMOUR MATH)
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