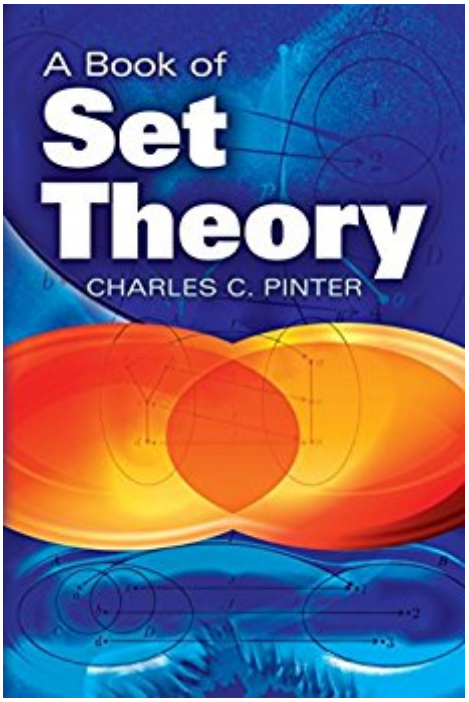
A Book Of Set Theory (Dover Books On Mathematics)



Synopsis

Suitable for upper-level undergraduates, this accessible approach to set theory poses rigorous but simple arguments. Each definition is accompanied by commentary that motivates and explains new concepts. Starting with a repetition of the familiar arguments of elementary set theory, the level of abstract thinking gradually rises for a progressive increase in complexity.A historical introduction presents a brief account of the growth of set theory, with special emphasis on problems that led to the development of the various systems of axiomatic set theory. Subsequent chapters explore classes and sets, functions, relations, partially ordered classes, and the axiom of choice. Other subjects include natural and cardinal numbers, finite and infinite sets, the arithmetic of ordinal numbers, transfinite recursion, and selected topics in the theory of ordinals and cardinals. This updated edition features new material by author Charles C. Pinter.

Book Information

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Customer Reviews

You know Dover-- wonderful for reprinting very high quality texts from back in the 60’s or earlier, for 10 bucks US or less, and perfectly adequate for topics that haven’t changed since Euclid. But "some" topics, especially those subject to numerical methods, combinatorics and computing, need a makeover to include the web, NumPy, MatLab (or GNU Octave free) and tablet sized

supercomputers vs. those era’s ideas of computing and combinatorics.This wonderful book gives us the best of both worlds, as the author has graciously updated many areas, such as Russell’s paradox (even though it goes back to 1901, let alone 1971!) with additional current set theory paradoxes and current thinking, and many other aspects of set theory and mathematical logic that have become crucial to newer topics like AI, natural language processing, computing, linguistics, combinatorics, the competing category theories, and much more.Even VERY current topics like equivalence in string and M theory use foundation concepts from set theory, so the topic itself is seminal and useful for many fields, from programming to engineering. The book is extremely well written, and quite intuitive (and even fun!) given the dry topic. Although every time I opine that a book requires fairly advanced undergrad I get a bunch of nasty emails from AP High School folks saying they get it, nevertheless, I have to be honest with potential buyers that this IS BOTH a basic (at first), then very advanced text as you proceed. For autodidacts, home schoolers, etc. it makes a wonderful adjunct to the more current texts, as it builds much more gently and intuitively than the majority of "show off" texts today, that expect much more from the reader notation wise.Every author and publisher willing to give as generous a "look inside" as this book does deserves our respect, so do take advantage of it if you’re concerned about the level. When you do, you’ll see the plentiful diagrams and examples/ exercises that have made this author so popular, for so many decades.If you’re old like me, you might "twinge" at the thought of this book, the foundations of which began what was called (and what we were "subjected to") known back then as the "new math." Sets became the transitional pain we endured. Here’s the ideal way to make peace with that issue at under 15 bucks! In fact, the author, even back in 71 at the height of it, points out how set theory, in historical perspective, isn’t "new" at all, but truly foundational, and as we go forward into topology, rings and even tensors, set theory keeps right up. And if you have a taste for the philosophy of math, indeterminacy, incompleteness, Frege, Godel, uncertainty, and those areas, this is a MUST. Luckily, set theory’s "Heisenberg" (Paul Joseph Cohen) published right in this book’s wheelhouse, so you’ll miss very little by making this choice in that regard. Enjoy!

Text is well written and clear. However I would prefer if it had more examples of proofs, and it has quite a few typos.

clear and precise. really liked it

I work with relational database and while I recently told one of my direct reports that you absolutely

DONT need to understand set theory at a level this book goes in to, I'm at that point in my career where the progression of my craft really starts to delve into theories, not just practice. That said, I'm also just a big math nerd. I found Godel Escher Bach (which is laden with logical calculus and set theory, although I didn't know it at the time) to be an amazing bit of work, and while this is far from the esoteric nature of that book, I found myself similarly intrigued by how the author presents the information. It really builds from a basic understanding to give you a solid foundation for stating with confidence how sets will behave, and how you can augment pure set theory as well as apply it creatively.

It's a good book...simple explanation.

The subject is clearly and simply presented. The author worked very hard on this.

It's definitely a good read. Very straight forward: Here are some definitions, here are some example proofs, I'll show you how to do some and then give you some examples to do, repeat. There was a drawback however. While the books goes into truth tables for propositional logic, and uses them to prove some sentences, it does not give you the actual basic rules of propositional logic. These are rules simply like Modus Ponens, Modus Tollens, Joining, Separation, Weakening, Cases, RAA, contrapositive etc. So essentially what you are going to do is use truth tables for the easier proofs and then use the sentences you've already proved to prove more involved sentences. Which is fine, but I think actually knowing the rules of propositional logic make proving these sentences and understanding the actual set theory much more intuitive. There are also some typos in the book, even in a theorem I noticed:Theorem 1.27 of unordered pairs should be If = then [x = u and **y = v**] or [x = v or y = u]. The typo is where I put the ** as the book says y = u instead of y = v.Anyways, I'm still giving it 4 stars simply because I say it's worth getting if you want to jump into set theory and its a lot better than some other set theory books I read.

Arrived very quickly! Completely satisfied!

(Dover Books on Mathematics) The Philosophy of Set Theory: An Historical Introduction to Cantor's Paradise (Dover Books on Mathematics) Elementary Number Theory: Second Edition (Dover Books on Mathematics) 2nd (second) Edition by Underwood Dudley published by Dover Publications (2008) READING ORDER: TAMI HOAG: BOOKS LIST OF THE BITTER SEASON, KOVAC/LISKA BOOKS, HENNESSY BOOKS, QUAID HORSES, DOUCET BOOKS, DEER LAKE BOOKS, ELENA ESTES BOOKS, OAK KNOLL BOOKS BY TAMI HOAG Recursion Theory, Godel's Theorems, Set Theory, Model Theory (Mathematical Logic: A Course With Exercises, Part II) Mathematics and the Imagination (Dover Books on Mathematics) One Hundred Problems in Elementary Mathematics (Dover Books on Mathematics) Mathematics for Quantum Mechanics: An Introductory Survey of Operators, Eigenvalues, and Linear Vector Spaces (Dover Books on Mathematics) The Nature and Power of Mathematics (Dover Books on Mathematics) Mathematics for the Nonmathematician (Dover Books on Mathematics) Understanding Infinity: The Mathematics of Infinite Processes (Dover Books on Mathematics) Mathematics and the Physical World (Dover Books on Mathematics) Concepts of Modern Mathematics (Dover Books on Mathematics) Undecidable Theories: Studies in Logic and the Foundation of Mathematics (Dover Books on Mathematics)