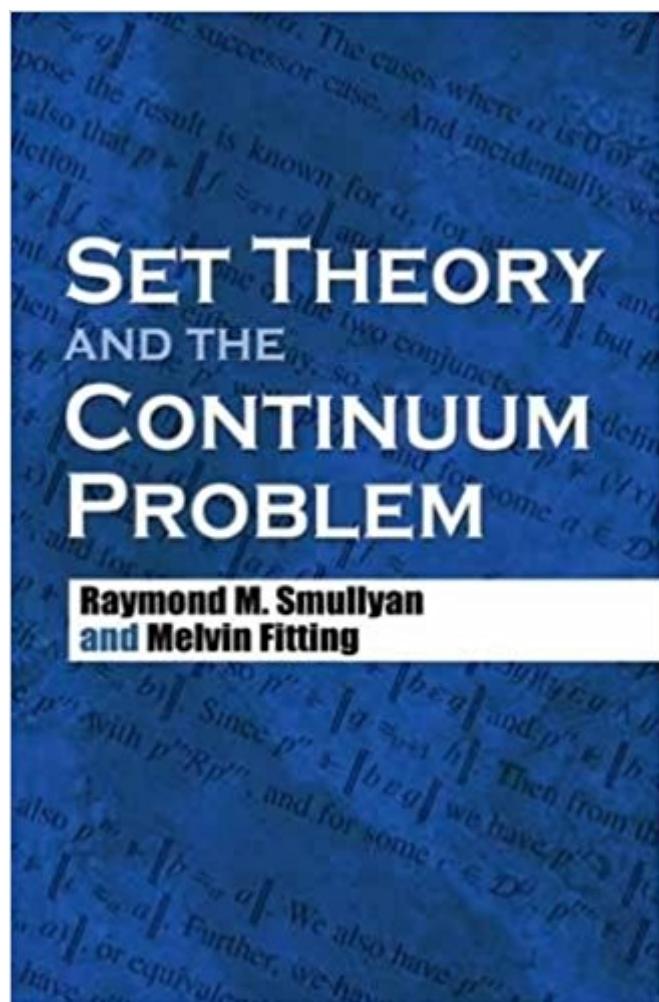The book was found

Set Theory And The Continuum Problem (Dover Books On Mathematics)

Synopsis

A lucid, elegant, and complete survey of set theory, this volume is drawn from the authors' substantial teaching experience. The first of three parts focuses on axiomatic set theory. The second part explores the consistency of the continuum hypothesis, and the final section examines forcing and independence results.Part One's focus on axiomatic set theory features nine chapters that examine problems related to size comparisons between infinite sets, basics of class theory, and natural numbers. Additional topics include author Raymond Smullyan's double induction principle, super induction, ordinal numbers, order isomorphism and transfinite recursion, and the axiom of foundation and cardinals. The six chapters of Part Two address Mostowski-Shepherdson mappings, reflection principles, constructible sets and constructibility, and the continuum hypothesis. The text concludes with a seven-chapter exploration of forcing and independence results. This treatment is noteworthy for its clear explanations of highly technical proofs and its discussions of countability, uncountability, and mathematical induction, which are simultaneously charming for experts and understandable to graduate students of mathematics.

Book Information

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Customer Reviews

"Smullyan and Fitting. . .achieve miraculous clarity in a subject crowded with intimidating espositions; in particular their book meets the very high standard of exposition set by Smullyan's previous works." --Choice"This text is a general introduction to NBG (von Neumann-Bernays-Godel class-set theory), and to Godel and Cohen proofs of the relative consistency and the independence of the generalized continuum hypothesis (GCH) and the axiom of choice (AC). . . .The authors write

with admirable lucidity. Thereare some truly charming set pieces on countability and uncountability and on mathematical induction--I intend to appropriate them for my classes. . . .this is an excellent book for anyone interested in set theory and foundations."--Mathematical Reviews"A well-written discussion of set theory, and readers will need a solid background in mathematics to fully appreciate its contents. The book is self-contained and intended for advanced undergraduates and graduate students in mathematics and computer science, especially those interested in set theoryand its relationship to logic." --Computing Reviews"Intended as a text for advanced undergraduates and graduate students. Essentially self-contained."--The Bulletin of Mathematics Books"The book under review is a textbook for a beginning graduate course on set theory. The structure is fairly standard, with the book divided into three main sections; after an introductory section developing the basic facts about the universe of set theory, there is a section on constructibility anda section on forcing. The main goals of the book are to give proofs that the axiom of choice (AC) and the generalised continuumhypothesis (GCH) are consistent with and independent of the axioms of Zermelo-Fraenkel set theory (ZF). . . . The distinctive features of this book are the use of class settheory, the treatment of induction, and the use of modal logic in the treatment of forcing. The writing is lucid and accurate, and the main theorems are proved in an efficient way."--Journal of Symbolic Logic "Smullyan and Fitting. . .achieve miraculous clarity in a subject crowded with intimidating espositions; in particular their book meets the very high standard of exposition set by Smullyan's previous works." --Choice "This text is a general introduction to NBG (von Neumann-Bernays-Godel class-set theory), and to Godel and Cohen proofs of the relative consistency and the independence of the generalized continuum hypothesis (GCH) and the axiom of choice (AC). . . .The authors write with admirable lucidity. There are some truly charming set pieces on countability and uncountability and on mathematical induction--I intend to appropriate them for my classes. . . .this is an excellent book for anyone interested in set theory and foundations."--Mathematical Reviews "A well-written discussion of set theory, and readers will need a solid background in mathematics to fully appreciate its contents. The book is self-contained and intended for advanced undergraduates and graduate students in mathematics and computer science, especially those interested in set theory and its relationship to logic." --Computing Reviews "Intended as a text for advanced undergraduates and graduate students. Essentially self-contained."--The Bulletin of Mathematics Books "The book under review is a textbook for a beginning graduate course on set theory. The structure is fairly standard, with the book divided into three main sections; after an introductory section developing the basic facts about the universe of set theory, there is a section on constructibility and a section on forcing. The main goals of the book

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Raymond M. Smullyan, Professor Emeritus, Indiana University. Melvin Fitting, Professor, City University of New York. --This text refers to an out of print or unavailable edition of this title.

This is just a heads up for those, like me, who would love to obtain an intact copy. There are still books with missing symbols out there and being sold on : I just received a new 2010 Dover edition from an online seller with a 5-star rating that had most/all of the math symbols missing. Checking the the Dover Publications website, which has a look inside feature, I found the version they display has all the symbols. So I assume that buying a copy directly from Dover would result in obtaining an intact book.Also some vendors certainly have copies with all the symbols (I just bought one from a small vendor who kindly checked the book for me by looking at the first definition on page 15 per my description of what should be there). The larger vendors typically cannot tell because they have no access to the book.Fortunately, my first purchase was fulfilled by so there was no problem returning it.

This is a great book for either self-study, or even as a text for a (probably 2-3 semester) course on set theory. It is very useful to have a little bit of background of naive set theory (although the book does go through a terse introduction to this). It is a great introduction to independence proofs and

forcing. I highly recommend it.Judging by some of the other reviews, it look like there may have been a printing that omitted some of the mathematical symbols. I ordered mine from several months ago, and it was fine.

I hope the author can logically cheat death, because I want him to live forever to write more books. I enjoyed all of his books, some of which were for the general reader (such as "What Is the Title of This Book?"), some highly technical (such as "Go:del's Incompleteness Theorems"). "Set Theory and the Continuum Problem" should be on the summer reading list of every high school kid.

Perhaps there were different printing runs, but as the first reviewer experienced, my copy lacked the symbols for membership, subset, quantifiers, etc. It really does make the book useless. I too would like to have a correctly printed copy.Update. I returned the book, explaining that the symbols were missing and got a replacement yesterday, Sept. 29. Unfortunately the replacement also lacks the symbols. The reviewer who had symbols is in Europe. Perhaps the US printing is messed up. I am going to go to a book store where I can look at the pages before I buy the book.

Very conversational...the authors give examples and set-ups that make the text easier to read straight-through, but much harder to use as a reference.

I just purchased the book. It is unreadable as many of the mathematical symbols are missing. The introduction makes it sound very interesting.

If you like infinities it works. More of a math supplement.

Some reviewers reported missing symbols. As one of the authors of the book, I was seriously concerned. (Disclaimer: we receive no royalties on this edition.) On checking with the publisher, Dover, I found that the second (not the first) printing was defective and was recalled, though some copies got out anyway. I understand the problem has now been corrected. This does not mean there are no errors in the book, but now they should be entirely those of the authors.

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