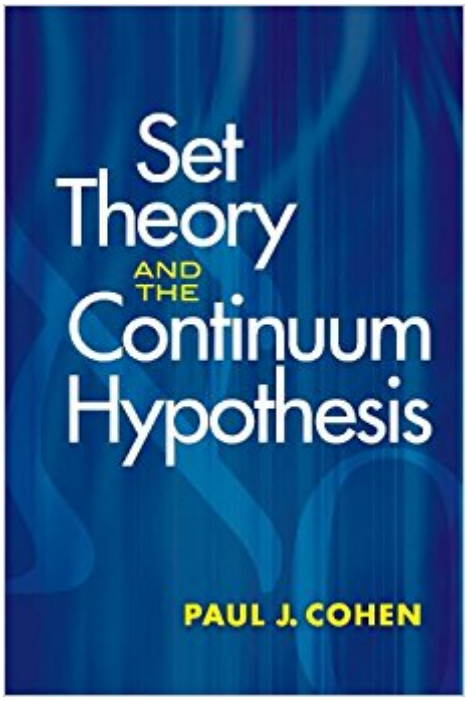
# Set Theory And The Continuum Hypothesis (Dover Books On Mathematics)



## Synopsis

This exploration of a notorious mathematical problem is the work of the man who discovered the solution. The independence of the continuum hypothesis is the focus of this study by Paul J. Cohen. It presents not only an accessible technical explanation of the author's landmark proof but also a fine introduction to mathematical logic. An emeritus professor of mathematics at Stanford University, Dr. Cohen won two of the most prestigious awards in mathematics: in 1964, he was awarded the American Mathematical Society's BÃ´cher Prize for analysis; and in 1966, he received the Fields Medal for Logic. In this volume, the distinguished mathematician offers an exposition of set theory and the continuum hypothesis that employs intuitive explanations as well as detailed proofs. The self-contained treatment includes background material in logic and axiomatic set theory as well as an account of Kurt GÃ¶del's proof of the consistency of the continuum hypothesis. An invaluable reference book for mathematicians and mathematical theorists, this text is suitable for graduate and postgraduate students and is rich with hints and ideas that will lead readers to further work in mathematical logic.

## Book Information

File Size: 1528 KB

Print Length: 190 pages

Publisher: Dover Publications (August 15, 2012)

Publication Date: August 15, 2012

Sold by:Â  Digital Services LLC

Language: English

ASIN: B00E1MKYM2

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #730,859 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #24 inÂ Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Pure Mathematics > Set Theory #130 inÂ Books > Science & Math > Mathematics > Pure Mathematics > Set Theory #276447 inÂ Books > Reference

## Customer Reviews

As a work of science, "Set Theory and the Continuum Hypothesis" stands on a par with Darwin's "On the Origin of Species". First, like Darwin's book, Cohen's work is a profound contribution to its field; second it is also accessible to any educated and interested reader, although with some effort.This edition is a reproduction of the first edition. You might be shocked by the type-this is a plain, typewritten document with no illustrations (I find it charming)-but Paul Cohen's crystal clear prose makes the book eminently readable.=WHAT YOU NEED=This is a graduate level book but you don't need to be a graduate student in mathematics to understand it. You do need a laymen's interest in mathematics; for instance you should enjoy reading Euclid, Ian Stewart, Douglas Hoftstadter, Martin Gardner. If you've enjoyed Douglas Hofstadter's "GÃ¶del, Escher, and Bach" then there is no reason you can't understand this book.=WHAT IT DELIVERS=First, Cohen gives a barebones but complete introduction to formal logic and logical notation.Then he describes formal set theory, known as Zemerlo Frankel set theory, the foundation of all mathematics as it stands today.Having spent half the book on the necessary background, Cohen arrives to his main topic, the Continuum Hypothesis and whether it is true or false.=WHAT COHEN SAYS=ST&CH proves that a long standing problem in mathematics (the Continuum Hypothesis) has no solution. What does this mean?Most mathematicians believe in a scaled down version of Hilbert's Programme. Hilbert hoped that all of mathematics followed from a small collection of definitions and axioms, much like all of geometry was once believed to follow from Euclid's five axioms.

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