The Mathematics of Logic: A Guide to Completeness Theorems and Their Applications

By Richard Kaye

Cambridge University Press, New Delhi, India, 2007. Paperback. Book Condition: New. First Edition. This undergraduate textbook covers the key material for a typical first course in logic, in particular presenting a full mathematical account of the most important result in logic, the Completeness Theorem for first-order logic. Looking at a series of interesting systems, increasing in complexity, then proving and discussing the Completeness Theorem for each, the author ensures that the number of new concepts to be absorbed at each stage is manageable, whilst providing lively mathematical applications throughout. Unfamiliar terminology is kept to a minimum, no background in formal set-theory is required, and the book contains proofs of all the required set theoretical results. The reader is taken on a journey starting with König's Lemma, and progressing via order relations, Zorn's Lemma, Boolean algebras, and propositional logic, to completeness and compactness of first-order logic. As applications of the work on first-order logic, two final chapters provide introductions to model theory and nonstandard analysis. Lively mathematical examples and some unusual formal systems stimulate the reader from the very beginning Suitable as an introduction to logic for students without any background in formal set theory Supported by companion web-pages containing further...

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Reviews

Basically no terms to clarify. It is actually writter in basic terms rather than confusing. I found out this ebook from my dad and i suggested this book to find out.
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