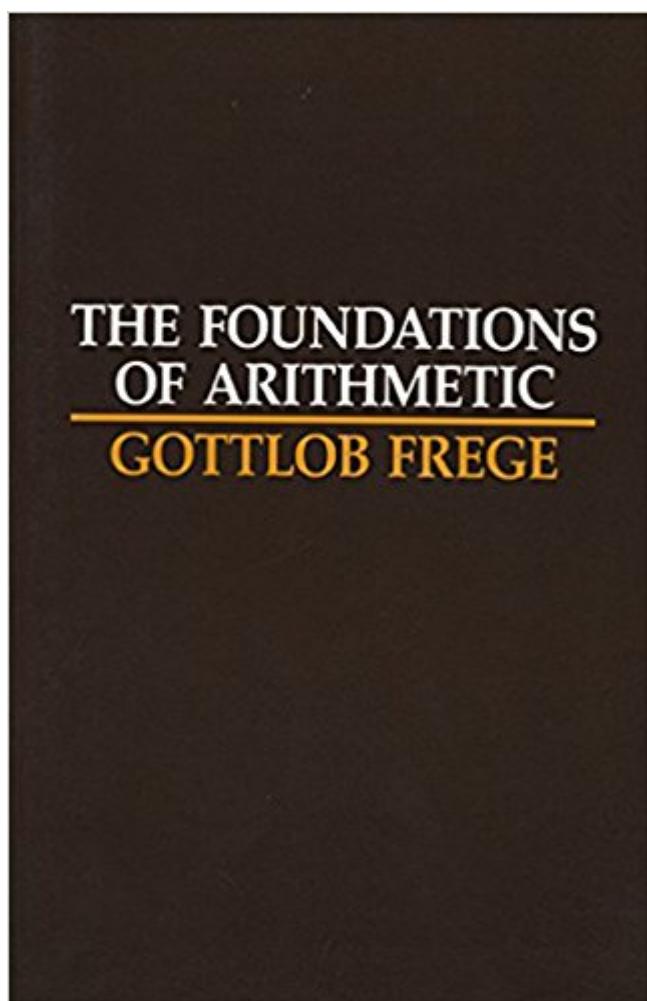The book was found

The Foundations Of Arithmetic: A Logico-Mathematical Enquiry Into The Concept Of Number

Synopsis

The Foundations of Arithmetic is undoubtedly the best introduction to Frege's thought; it is here that Frege expounds the central notions of his philosophy, subjecting the views of his predecessors and contemporaries to devastating analysis. The book represents the first philosophically sound discussion of the concept of number in Western civilization. It profoundly influenced developments in the philosophy of mathematics and in general ontology.

Book Information

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Customer Reviews

"There can be no doubt about the greatness of this work." --Philosophy"It will be welcomed by all who are interested in mathematical logic and the foundations of mathematics . . . Frege's style of exposition is a model for all who think and write about abstract topics." --Mind

Text: English (translation) Original Language: German

It's no exaggeration to say Frege was one of the greatest logicians of all time. What's more for the reader these days, he's also one of the greatest and most lucid teachers of this sometimes arcane and difficult science. This book is an excellent introduction to this towering figure's genius.

I'm a self-directed learner and had been struggling with generating interest in mathematics for some time. I had bought this book in the hopes that it would bridge my love and interest in logic with a new

found interest in mathematics. It did exactly that.

I have no idea what's going on but I hope one day to be smart enough to understand the foundations of mathematics. Respect

The amazing thing about the little handful of books on Mathematical Philosophy--2 by Shapiro, Frege, Russell and of course Benacerraf and Putnam's classic, is the paucity of literature in this key field!Some will say that mathematical philosophy, or the closely related philosophy of mathematics, only began in the 1980's in earnest. But reading the "big 5" shows threads going back to antiquity. The field is far from settled, and the two aspects--the philosophy of math itself, and the closely related field of applying math and logic TO other branches of philosophy, has enough active journalized information in the mid 2014+ years to fill 50 volumes. Since thousands have been written in mainline philosophy, and even the philosophy of science as well as logic, this is not without surprise and mystery.The good news is that an invested, energetic reader can pick up this handful of keys and be in the top percent of folks on the planet with a good foundation! This is hardly true of any other field. I'd start with Shapiro's Oxford Encylopedia, study Benacerraf and Putnam's classic collection of essays, then finish with Shapiro's deep and difficult "Thinking about" and of course Russell and Frege for historic and specialized puzzle pieces.One "sleeper" I'd like to recommend that is not usually included in comparisons of books in this field is Steinhart:Ã Â More Precisely: The Math You Need to Do Philosophy.Eric helps with both math within philosophy (the basics) and tangentially helps with the math used as examples within the philosophy OF math. Beyond the issues of categorization, discovery, math as model vs. underpinning reality ala the Matrix, there of course is the whole field of logic, induction, deduction, etc. which has thousands of volumes. The six mentioned here cover logic, but are much more specific in the broader subject area of mathematics, which now includes dynamical systems and differential equations undreamt of in the past, and bringing many new mental tools to bear, from intuition to analytic, qualitative, numeric, perturbative and of course stochastic. Here are the other links to those mentioned in this survey:The Oxford Handbook of Philosophy of Mathematics and Logic (Oxford Handbooks)Thinking about Mathematics: The Philosophy of MathematicsPhilosophy of Mathematics: Selected ReadingsThe Foundations of Arithmetic: A Logico-Mathematical Enquiry into the Concept of NumberIntroduction to Mathematical PhilosophyEnjoy!

This subtitle, "A Logico-mathematical Enquiry into the Concept of Number," indicates very well the

nature of the work. The first three quarters of the book are devoted to a critical analysis of the idea of previous writers (Kant, Leibnitz, Grassmann, Mill, Lipschitz, Hankel, Jevons, Cantor, SchrÃƒÂ¶der, Hobbers, Hume, and others) on the subject of number, and Frege does not find the ideas of any of these philosophers and mathematicians entirely satisfactory. His conclusions is "that a statement of a number contains an assertion about a concept," and his definition of number is: The number which belongs to the concept F is the extension of the concept "equal to the concept F."Frege regards the number zero as belonging to to the "natural" or "counting" numbers, whereas we subscribe to the view that zero is not a counting number at all (the first of the counting numbers being 1) and is only properly used when we regard a number as a "relative-magnitude," zero being the relative-magnitude of two equal counting numbers.This work of Frege's has considerable historical interest as a forerunner of the work of Whitehead and Russell. The translation is excellent and the printing leaves nothing to be desired.

Gottlob Frege's FOUNDATIONS OF ARITHMETIC contains rigorous, clear, even beautiful writing about the definition of "number", (or, to be more exact, "integer"), a concept which often gives rise in other philosophical works to unnecessarily complicated discussions. In a nutshell, Frege's definition (spoiler alert!) of each integer is the set (or meta-set if you prefer) of all sets each of which contains that number of elements. For instance, the number three is the set of all sets which contain three elements each. It's just about that simple.

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