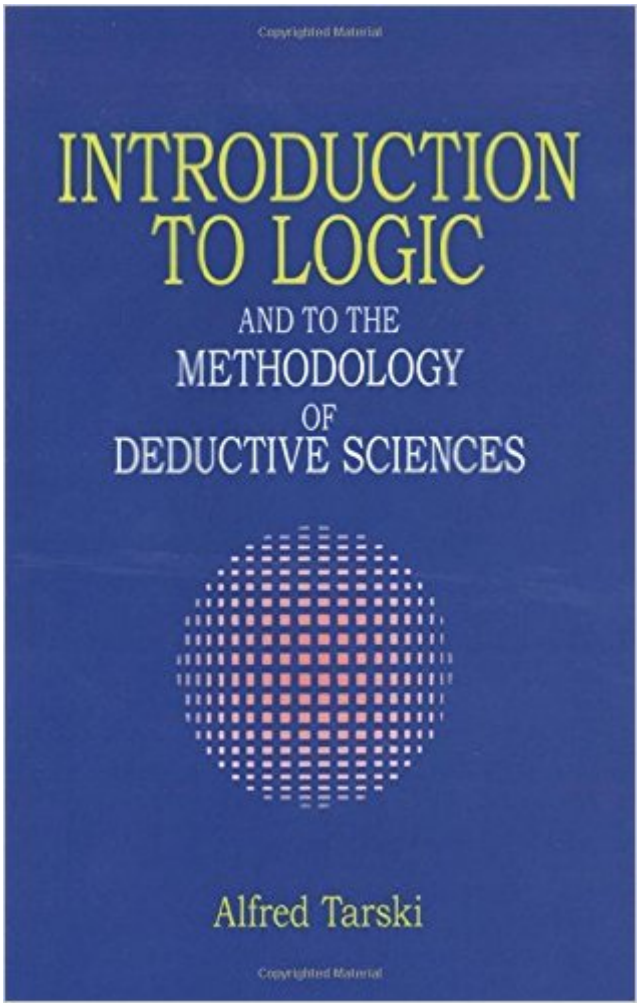
Introduction To Logic: And To The Methodology Of Deductive Sciences (Dover Books On Mathematics)



Synopsis

First published in Polish in 1936, this classic work was originally written as a popular scientific book â " one that would present to the educated lay reader a clear picture of certain powerful trends of thought in modern logic. According to the author, these trends sought to create a unified conceptual apparatus as a common basis for the whole of human knowledge.Because these new developments in logical thought tended to perfect and sharpen the deductive method, an indispensable tool in many fields for deriving conclusions from accepted assumptions, the author decided to widen the scope of the work. In subsequent editions he revised the book to make it also a text on which to base an elementary college course in logic and the methodology of deductive sciences. It is this revised edition that is reprinted here.Part One deals with elements of logic and the deductive method, including the use of variables, sentential calculus, theory of identity, theory of classes, theory of relations and the deductive method. The Second Part covers applications of logic and methodology in constructing mathematical theories, including laws of order for numbers, laws of addition and subtraction, methodological considerations on the constructed theory, foundations of arithmetic of real numbers, and more. The author has provided numerous exercises to help students assimilate the material, which not only provides a stimulating and thought-provoking introduction to the fundamentals of logical thought, but is the perfect adjunct to courses in logic and the foundation of mathematics.

Book Information

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Customer Reviews

I am an engineer by profession and my background is that of circuit design and signal processing. I

have a PhD in analog circuit design. I read math purely out of interest and I am extremely passionate about it. Unfortunately, I do not have a professor to guide me so I look for good books online and teach myself.Not to refute what other reviewers have said but I feel that the negative points that are usually mentioned about this book are actually the most positive aspects about the book. It is amazing that the same aspect can be very useful for one person while for others, it might not be that suitable.1. People say that it is verbose: For me, I would like to rephrase that as 'the book carefully walks the student through the basic notion and structure of logic the way it must be in an introductory course'. For someone like me who is new to pure math, his presentation is extremely useful. Logic is very abstract and unless taught well, it will not sink in.Example: Why the hell did they formulate the 'if....then....' statement in such a weird manner? More precisely, the sentence 'if 2+2=5, then santa clara is a small town' is considered true. Why? For someone who is being introduced to logic for the first time, this sentence will sound really weird. What the hell is the relationship between 2+2=5 and the size of santa clara? On top of that, how can this statement be true when the two sentences are not related in any possible way?The answer lies in the difference between material logic which is used in mathematical logic and formal logic which we are all familiar with. MATH LOGIC is not same as the logic we are used to. I realized this when I read this book and has been explained extremely well in the second chapter.

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