

<<希尔伯特空间问题集>>

图书基本信息

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## 前言

The only way to learn mathematics is to do mathematics. That tenet is the foundation of the do.it.yourself, Socratic, or Texas method. the method in which the teacher plays the role of an omniscient but largely uncommuni. cative referoe between the learner and the facts. Although that method is usually and perhaps necessarily oral.

this book tries to use the same method to give a written exposition of certain topics in Hilben space theory.

The right way to read mathematics is first to read the definitions of the concepts and the statements of the theorems, and then, putting the book aside, to try to discover the appropriate proofs. If the theorems are not trivial, the attempt might fail, but it is likely to be instructive just the same. To the passive reader a routine computation and a miracle of ingenuity come with equal ease, and later, when he must depend on himself, he will find that they went as easily as they came. The active reader, who has found out what does not work, is in a much better position to understand the reason for the SUCCESS of the author's method, and,

later, to find answers that are not in books. This book was written for the active reader. The first part consists of problems, frequently preceded by definitions and motivation,

and some times followed by corollaries and historical remarks. Most of the problems are statements to be proved, but some are questions ( is it ?

what is ?

) , and some are challenges ( construct , determine ) . The second part , a very short one , consists of hints. A hint is a word,

or a paragraph , usually intended to help the reader find a solution. The hint itself is not necessarily a condensed solution of the problem : it may just point to what I regard as the heart of the matter. Sometimes a problem contains a trap , and the hint may serve to chide the reader for rushing in too recklessly. The third part.

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内容概要

This book was written for the active reader. The first part consists of problems , frequently preceded by definitions and motivation , and some-times followed by corollaries and historical remarks. Most of the problems are statements to be proved , but some are questions (is it? , what is?) , and some are challenges (construct , determine). The second part , a very short one , consists of hints. A hint is a word , or a paragraph , usually intended to help the reader find a solution. The hint itself is not necessarily a con-densed solution of the problem; it may just point to what I regard as the heart of the matter. Sometimes a problem contains a trap , and the hint may serve to chide the reader for rushing in too recklessly. The third part , the longest , consists of solutions : proofs , answers , or constructions , depending on the nature of the problem

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