

<<分析 (影印版)>>

图书基本信息

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前言

为了更好地借鉴国外数学教育与研究的成功经验，促进我国数学教育与研究事业的发展，提高高等学校数学教育教学质量，本着“为我国热爱数学的青年创造一个较好的学习数学的环境”这一宗旨，天元基金赞助出版“天元基金影印数学丛书”。

该丛书主要包含国外反映近代数学发展的纯数学与应用数学方面的优秀书籍，天元基金邀请国内各个方向的知名数学家参与选题的工作，经专家遴选、推荐，由高等教育出版社影印出版。

为了提高我国数学研究生教学的水平，暂把选书的目标确定在研究生教材上。

当然，有的书也可作为高年级本科生教材或参考书，有的书则介于研究生教材与专著之间。

欢迎各方专家、读者对本丛书的选题、印刷、销售等工作提出批评和建议。

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内容概要

本书第一卷的内容包括集合与函数、离散变量的收敛性、连续变量的收敛性、幂函数、指数函数与三角函数；第二卷的内容包括Fourier级数和Fourier积分以及可以通过Fourier级数解释的Weierstrass的解析函数理论。

本书是作者在巴黎第七大学讲授分析课程数十年的结晶，其目的是阐明分析是什么，它是如何发展的。

本书非常巧妙地将严格的数学与教学实际、历史背景结合在一起，对主要结论常常给出各种可能的探索途径，以使读者理解基本概念、方法和推演过程。

作者在本书中较早地引入了一些较深的内容，如在第一卷中介绍了拓扑空间的概念，在第二卷中介绍了Lebesgue理论的基本定理和Weierstrass椭圆函数的构造。

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章节摘录

插图：The concept of a set¹⁰ is a primitive concept in mathematics; one can no more provide a definition than Euclid could define mathematically what a point is. In my youth there were those who said that a set is "a collection of objects of the same nature"; apart from the vicious circle (what indeed is a "collection" ? a set ?

), to talk of "nature" is empty and means nothing¹¹. Certain denigrators of the introduction of "modern math" into elementary education have been scandalised to see that in some textbooks they have had the temerity to form the union of a set of apples with a set of pears; never mind that a normal child will tell you that this gives a set of fruits, or even of things, and if asked to count the number of elements of the union any moderately intelligent child can explain to you that it does not matter that the first set consists of apples rather than oranges and the second of pears rather than dessert spoons; the fact that the Louvre Museum combines disparate collections - of pictures, sculptures, ceramics, gold work, mummies, etc. - has never troubled anyone. One calls this: to acquire the sense of abstraction. The logicians have in any case long since invented a radical method of eliminating questions concerning the "nature" of mathematical objects or sets (the two terms are synonymous). One can describe this in a figurative way by saying that a set is a "primary" box containing "secondary" boxes, its elements, no two of which have identical contents, which in their turn contain "tertiary" boxes themselves containing... The Louvre is a collection of collections (of paintings, sculptures, etc.), the collection of paintings is itself a collection of paintings stolen by Bonaparte, Monge and Berthollet in Italy (we unfortunately had to return it in 1815), bequeathed by ... private collectors, bought at sales, etc.

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