## CONTENTS

	Foreword	III
	Author's Preface	VIII
1.	The Various Types of Numbers	1
2.	Criticism of the Extension of Numbers	12
3.	Arithmetic and Geometry	18
4.	The Rigorous Construction of the Theory of Integers	25
5.	The Rational Numbers	49
6.	Foundation of the Arithmetic of Natural Numbers	66
7.	Rigorous Construction of Elementary Arithmetic	79
8.	The Principle of Complete Induction	88
9.	Present Status of the Investigation of the Foundations A. Formalism B. The Logical School C. Outlook	100 100 107 116
10.	Limit and Point of Accumulation	123
11.	Operating with Sequences. Differential Quotient	141
12.	Remarkable Curves Appendix: What Is Geometry?	153 175
13.	The Real Numbers A. Cantor's Theory B. Dedekind's Theory C. Comparison of the Two Theories D. Uniqueness of the Real Number System E. Various Remarks	182 185 198 205 208 214
14.	Ultrareal Numbers	219
15.	Complex and Hypercomplex Numbers	<b>22</b> 6
16.	Inventing or Discovering	235
	Epilogue	245
	Index	247