## Contents

CHAPTER 1	INEQUALITIES	
1.0	What Do Numbers Mean?	1
1.1	Order Relations in <b>Z</b> <sup>+</sup>	2
1.2	Order Relations in $\boldsymbol{Z}$ and $\boldsymbol{Q}$	6
	Inequalities and their Applications	13
	Geometry of Inequalities and Arithmetic Operations	18
1.5	Composition of Mappings and Parentheses	27
1.6	The Graph of a Mapping	33
1.7	Absolute Value and Distance	37
1.8	Working with Absolute Values and Inequalities	45
CHAPTER 2	REAL NUMBERS AND LIMITS	
2.0	Examples	51
2.1	Positive Real Numbers and Sequential Approximation	55
	Arithmetic in $R^+$	69
2.3	Real Numbers	78
CHAPTER 3	THE MEANING OF CONVERGENCE	
3.0	Introduction	89
3.1	Convergent Sequences	90
3.2	More on Convergence	103
3.3	Series	109
3.4	Rearranging Terms of Convergent Series	114
ANSWERS T	O SELECTED EXERCISES	122
INDEX		128