

1	Ine Alphabet	. /
1.1	Sets	7
1.1.1	The Third Mathematical Crisis	
1.1.2	Subsets	
1.1.3	Operations and Closedness	. 9
1.2	Mathematical Structures	10
1.2.1	Groups	
1.2.2	Fields and ${\mathbb R}$	11
2	The Words $\mathbb R$	13
2.1	Logics and Proofs	13
2.1.1	Implications and Negations	14
2.1.2	Conjunctions and Disjunctions	
2.1.3	Quantifiers	
2.1.4	Proofs, finally	16
2.2	Nouns	18
2.2.1	The Proper Nouns	18
2.2.2	All Nouns from Proper Nouns	19
2.3	Emotions	19
2.4	Well-ordering and Mathematical Induction	22
2.5	The Final Axiom	25

3	Conversations with $\mathbb R$	27
3.1.1 3.1.2 3.1.3 3.1.4	Functions The Basics	29 30
3.2	Limits	34
3.3	Sequences	35
3.4	Continuity	35
3.5	Differentiability	35
4	Group Conversations with \mathbb{R}^n	37
4.1	Vector Spaces	37
4.2	Linear Maps	37
4.3	Matrices and Determinant	37
4.4	Emotions and Continuity	37
4.5	Differentiability	37
5	Information in Conversations	39
5.1	Partitions and Integrals	39
5.2	Fundamental Theorem of Calculus	39
5.3	log and exp	39
5.4	Measure and measurability	39
5.5	Improper Integrals	39
5.6	Sequences and Series	39
6	Analyzing Multiple Conversations	41
6.1	Uniform Convergence	41
6.2	Ordinary Differential Equations	41
6.3	Equicontinuity	41
6.4	Function Approximations	41
7	What We Missed: Topology	43
7.1	Open Sets, Closed Sets	43
7.2	Continuity	43
7.3	Compactness	43

7.4 Connectedness