

Contents

Preface ix

I	Infinity	1
	1 Infinite Cardinalities	3
	Appendix: Answers to Exercises	23
	2 The Higher Infinite	31
	Appendix: Answers to Exercises	56
	3 Omega-Sequence Paradoxes	61
	Appendix: Answers to Exercises	86
II	Decisions, Probabilities, and Measures	91
	4 Time Travel	93
	Appendix: Answers to Exercises	117
	5 Newcomb's Problem	119
	Appendix A: The Prisoner's Dilemma	138
	Appendix B: The Tickle Defense	140
	Appendix C: Answers to Exercises	143
	6 Probability	149
	Appendix: Answers to Exercises	173
	7 Non-Measurable Sets	181
	Appendix: Answers to Exercises	197
	8 The Banach-Tarski Theorem	205
	Appendix: Answers to Exercises	222

III	Computability and Gödel's Theorem	227
	9	Computability 229
		Appendix: Answers to Exercises 248
	10	Gödel's Theorem 255
		Appendix A: Proof of the Lemma 270
		Appendix B: Answers to Exercises 281
		Glossary 283
		Bibliography 295
		Index 299