

Contents

<i>List of Color Plates</i>	ix
<i>Preface</i>	xi
<i>Prologue: Cambridge, England, 1993</i>	1
1 Mesopotamia, 1800 BCE	4
Sidebar 1: Did the Egyptians Know It?	13
2 Pythagoras	17
3 Euclid's <i>Elements</i>	32
Sidebar 2: The Pythagorean Theorem in Art, Poetry, and Prose	45
4 Archimedes	50
5 Translators and Commentators, 500–1500 CE	57
6 François Viète Makes History	76
7 From the Infinite to the Infinitesimal	82
Sidebar 3: A Remarkable Formula by Euler	94
8 371 Proofs, and Then Some	98
Sidebar 4: The Folding Bag	115
Sidebar 5: Einstein Meets Pythagoras	117
Sidebar 6: A Most Unusual Proof	119
9 A Theme and Variations	123
Sidebar 7: A Pythagorean Curiosity	140
Sidebar 8: A Case of Overuse	142
10 Strange Coordinates	145
11 Notation, Notation, Notation	158

12	From Flat Space to Curved Spacetime	168
	Sidebar 9: A Case of Misuse	177
13	Prelude to Relativity	181
14	From Bern to Berlin, 1905–1915	188
	Sidebar 10: Four Pythagorean Brainteasers	197
15	But Is It Universal?	201
16	Afterthoughts	208
	 <i>Epilogue: Samos, 2005</i>	 213
	 Appendixes	
A.	How did the Babylonians Approximate $\sqrt{2}$?	219
B.	Pythagorean Triples	221
C.	Sums of Two Squares	223
D.	A Proof that $\sqrt{2}$ is Irrational	227
E.	Archimedes' Formula for Circumscribing Polygons	229
F.	Proof of some Formulas from Chapter 7	231
G.	Deriving the Equation $x^{2/3} + y^{2/3} = 1$	235
H.	Solutions to Brainteasers	237
	 <i>Chronology</i>	 241
	<i>Bibliography</i>	247
	<i>Illustrations Credits</i>	251
	<i>Index</i>	253