

Contents

<i>Preface</i>	<i>page ix</i>
1 Introduction	1
2 Accelerated motion: gravity	9
Mersenne’s problem	11
Riccioli’s attempt	14
3 Accelerated motion: centrifugal force	16
<i>De Vi Centrifuga</i>	19
The conical pendulum	26
Precursors	33
4 Accelerated motion: curvilinear fall	44
The Galilean treatise	45
The isochronism of the cycloid	48
The pendulum clock	64
5 Evolutes	71
The rectification of the cycloid	77
The evolute of the cycloid	82
The evolute of the parabola	85
The general formula	89
6 Curvature	97
Apollonius and minimal lines	98
Newton and measure	105
Leibniz and structure	108
7 Rectification	116
Priority and the parabola	119
Evolutes and rectification	126
Priority and the pendulum	130

viii	<i>Contents</i>	
	Dimension reduction and pi	134
	Geometry and the calculus	141
8	Diversions	148
	Sea trials	151
	The universal measure	154
	The compound pendulum	156
	Further discoveries	160
	Caustics	163
9	Conclusion	169
	<i>Notes</i>	180
	<i>Bibliography</i>	227
	<i>Index</i>	235