

Table of Contents

| | |
|--|-----|
| INTRODUCTION | |
| 1. Life of Diocles | 1 |
| 2. Diocles' work: Title and Subject | 3 |
| 3. The theory of conic sections up to the time of Diocles | 3 |
| 4. Conics in <i>On Burning Mirrors</i> | 9 |
| (i) Theory and terminology | 9 |
| (ii) The focus of the parabola | 15 |
| (iii) Construction of the parabola from focus and directrix | 16 |
| 5. Influence of <i>On Burning Mirrors</i> | 18 |
| 6. Manuscripts and Text of <i>On Burning Mirrors</i> | 26 |
| Editorial Procedures | 32 |
| ON BURNING MIRRORS | |
| Text and translation | 34 |
| Photographs of Meshhed manuscript | 114 |
| Commentary | 138 |
| Appendix A. Text and translation of Eutocius' excerpts from <i>On Burning Mirrors</i> | 177 |
| (i) Corresponds to Props. 7 and 8 | 178 |
| (ii) Corresponds to Prop. 10 | 192 |
| (iii) Corresponds to Props. 11, 12 and 13 | 196 |
| Appendix B. Other ancient and medieval proofs of the focal property of the parabola | 202 |
| (i) The Bobbio Mathematical Fragment | 202 |
| (ii) Ibn al-Haytham | 203 |
| Appendix C. Analysis of Archimedes' problem and Diocles' solution, by O. Neugebauer | 205 |
| Appendix D. Proof that rays reflected from the surface formed by the revolution of a parabola about a chord perpendicular to the axis do not all meet the circumference of a circle, by O. Neugebauer | 213 |
| Bibliography | 217 |
| Index of Technical Terms | 224 |
| General Index | 239 |