

Sources
in the History of Mathematics and
Physical Sciences 9

APOLLONIUS
CONICS
BOOKS V TO VII

THE ARABIC TRANSLATION OF
THE LOST GREEK ORIGINAL IN
THE VERSION OF THE BANŪ MŪSA

VOLUME I

Edited
With Translation and Commentary by
G.J. TOOMER



Springer-Verlag

Table of Contents

Volume I

Part 1

Introduction

§1 Apollonius: Life.....	xi
§2 Works other than the <i>Conics</i>	xii
§3 The <i>Conics</i>	xiv
a. Composition and contents.....	xiv
b. History after Apollonius.....	xvi
i. In antiquity.....	xvi
ii. In the Islamic world.....	xvii
iii. In the medieval west	xix
iv. In the Renaissance	xx
c. Recovery of the later books in Europe	xxi
d. Modern editions and translations of the <i>Conics</i>	xxv
§4 Mathematical Summary	xxviii
a. Generation of conic sections before Apollonius.....	xxviii
b. Apollonius' method of generating the sections.....	xxix
c. Propositions from <i>Conics</i> I and II used in Books V-VII	xxx
d. Book V.....	xxxviii
e. Book VI.....	lxi
f. Book VII.....	lxix
§5 The Ancient Mathematical Background	lxxxi
a. "Geometrical algebra"	lxxxii
b. Ratios	lxxxiv
c. Analysis, synthesis and determination	lxxxiv
§6 Descriptions of Manuscripts	lxxxv
§7 Editorial Principles	xc
a. The text.....	xc
b. The translation	xcii
c. The figures	xciv
d. The notes	xciv
e. The appendices	xcv
f. The indexes	xcv

Part 2

Conics: Text and Translation

Book V	2
Book VI	262
Book VII	382

Volume II

Part 3

Notes on the Text and Translation

Notes on Book V	551
Notes on Book VI	576
Notes on Book VII	595

Part 4

Appendices

Appendix A: Preface to the <i>Conics</i> of the Banū Mūsā	619
Appendix B: Premisses of the Banū Mūsā	631
Appendix C: Premisses of al-Shirāzī	651
Appendix D: Huygens' solution of the problem of Pappus IV 30	659

Part 5

Figures

Figures to the Introduction	665
Figures to Book V	680
Figures to Book VI	746
Figures to Book VII	779
Figures to the Appendices	835

Part 6

Bibliography and Indexes

Bibliography	847
I: Index of Technical Terms	859
II: General Index	882