Table of Contents for TEXT/44

Geometry: The Line and the Circle

- The line and the circle
- Euclid's Elements: Definitions and axioms
- Book I of Euclid's Elements: Neutral geometry
- Spherical geometry
- Taxicab geometry
- Hilbert and Gödel
- Book I: Non-Neutral geometry
- Book II: Geometric algebra
- Book VI: Similarity
- Book III: Circles
- Book IV: Circles & polygons
- Models for the hyperbolic plane
- Axiomatic hyperbolic geometry
- Finite geometries
- Isometries
- Constructibility
- Appendix A: Euclid's definitions and axioms
- Appendix B: Euclid's propositions
- Appendix C: Visual guide to Euclid's propositions
- Appendix D: Euclid's proofs
- Hilbert's axioms for plane Euclidean geometry
- Credits, permissions and acknowledgments
- Bibliography
- Notation index
- Index