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Titolo	A Full Axiomatic Development of High School Geometry // David M. Clark and Samrat Pathania
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Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (140 pages)
Disciplina	516
Soggetti	Geometry - Study and teaching (Secondary) Geometry, Projective - Foundations Geometria Educació secundària Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Foundational Principles -- Neutral Geometry -- Similar Figures -- Area Measure -- Angle Measure -- Trigonometry -- Circle Measure -- Consistency and Models -- Appendix A: Axioms -- Appendix B: MCL #9 -- Appendix C: Font Guide -- Appendix D: Theorem Index -- Appendix E: Notation Index -- Bibliography -- Index. .
Sommario/riassunto	This textbook provides a full and complete axiomatic development of exactly that part of plane Euclidean geometry that forms the standard content of high school geometry. It begins with a set of points, a measure of distance between pairs of points and ten simple axioms. From there the notions of length, area and angle measure, along with congruence and similarity, are carefully defined and their properties proven as theorems. It concludes with a proof of the consistency of the axioms used and a full description of their models. It is provided in guided inquiry (inquiry-based) format with the intention that students will be active learners, proving the theorems and presenting their proofs to their class with the instructor as a mentor and a guide. The book is written for graduate and advanced undergraduate students interested in teaching secondary school mathematics, for pure math

majors interested in learning about the foundations of geometry, for faculty preparing future secondary school teachers and as a reference for any professional mathematician. It is written with the hope of anchoring K-12 geometry in solid modern mathematics, thereby fortifying the teaching of secondary and tertiary geometry with a deep understanding of the subject.
