

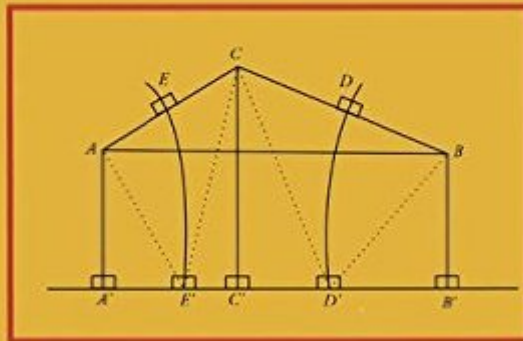
The book was found

The Foundations Of Geometry And The Non-Euclidean Plane (Undergraduate Texts In Mathematics)

Undergraduate Texts in Mathematics

George E. Martin

The Foundations of Geometry and the Non-Euclidean Plane



Springer

PDF



DOWNLOAD EBOOK

Synopsis

This book is a text for junior, senior, or first-year graduate courses traditionally titled Foundations of Geometry and/or Non-Euclidean Geometry. The first 29 chapters are for a semester or year course on the foundations of geometry. The remaining chapters may then be used for either a regular course or independent study courses. Another possibility, which is also especially suited for in-service teachers of high school geometry, is to survey the fundamentals of absolute geometry (Chapters 1 -20) very quickly and begin earnest study with the theory of parallels and isometries (Chapters 21 -30). The text is self-contained, except that the elementary calculus is assumed for some parts of the material on advanced hyperbolic geometry (Chapters 31 -34). There are over 650 exercises, 30 of which are 10-part true-or-false questions. A rigorous ruler-and-protractor axiomatic development of the Euclidean and hyperbolic planes, including the classification of the isometries of these planes, is balanced by the discussion about this development. Models, such as Taxicab Geometry, are used extensively to illustrate theory. Historical aspects and alternatives to the selected axioms are prominent. The classical axiom systems of Euclid and Hilbert are discussed, as are axiom systems for three- and four-dimensional absolute geometry and Pieri's system based on rigid motions. The text is divided into three parts. The Introduction (Chapters 1 -4) is to be read as quickly as possible and then used for reference if necessary.

Book Information

Series: Undergraduate Texts in Mathematics

Hardcover: 512 pages

Publisher: Springer (December 19, 1997)

Language: English

ISBN-10: 0387906940

ISBN-13: 978-0387906942

Product Dimensions: 6.1 x 1.2 x 9.2 inches

Shipping Weight: 1.8 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars [See all reviews](#) (1 customer review)

Best Sellers Rank: #2,066,775 in Books (See Top 100 in Books) #79 in [Books > Science & Math > Mathematics > Geometry & Topology > Non-Euclidean Geometries](#) #1186 in [Books > Textbooks > Science & Mathematics > Mathematics > Geometry](#)

Customer Reviews

Though perfectly clear to the mathematician, Non-Euclidean geometry is surrounded by an aura of

mystery and mistrust among the general public, and even a good many mathematicians would be hard pressed to explain exactly how the negation of the parallel postulate leads to all those strange formulas teeming with hyperbolic functions and other exotica. G.E. Martin explains everything beautifully, with exemplary clarity and just the right amount of detail. The reader also gets a complete construction of Euclidean geometry starting with the Birkhoff-Halsted axiom system, as well as a wealth of historical information into the bargain. Every serious math major or amateur ought to read this book, and many a professional could well benefit from it.

[Download to continue reading...](#)

The Foundations of Geometry and the Non-Euclidean Plane (Undergraduate Texts in Mathematics)
Geometry Illuminated: An Illustrated Introduction to Euclidean and Hyperbolic Plane Geometry (Maa Textbooks)
Geometry by Construction: Object Creation and Problem-solving in Euclidean and Non-Euclidean Geometries
Euclidean And Non-Euclidean Geometry::Development and History, 4th edition.[Hardcover,2007]
Taxicab Geometry: An Adventure in Non-Euclidean Geometry (Dover Books on Mathematics)
Euclidean and Non-Euclidean Geometries: Development and History
Euclidean and Non Euclidean Geometries Development and History 4th (Fourth) Edition
byGreenberg
Euclidean and Non-Euclidean Geometries
Non-Euclidean Geometry (Dover Books on Mathematics)
Ideals, Varieties, and Algorithms: An Introduction to Computational Algebraic Geometry and Commutative Algebra (Undergraduate Texts in Mathematics)
Elementary Topics in Differential Geometry (Undergraduate Texts in Mathematics)
Elements of Algebra: Geometry, Numbers, Equations (Undergraduate Texts in Mathematics)
The Fourth Dimension and Non-Euclidean Geometry in Modern Art (Leonardo Book Series)
Modern Geometries: Non-Euclidean, Projective, and Discrete Geometry (2nd Edition)
Non-Euclidean Geometry for Babies (Math for Babies)
Non-Euclidean Geometry (Mathematical Association of America Textbooks)
The elements of non-Euclidean geometry
Basic and Advanced Light Plane Body Maintenance: (Light Plane Maintenance Library, Vol. 2)
Discrete Mathematics: Elementary and Beyond (Undergraduate Texts in Mathematics)
Mathematics and Its History (Undergraduate Texts in Mathematics)

[Dmca](#)