Modern Geometries

By James R. Smart

Modern Geometries By James R. Smart

This comprehensive, best-selling text focuses on the study of many different geometries -- rather than a single geometry -- and is thoroughly modern in its approach. Each chapter is essentially a short course on one aspect of modern geometry, including finite geometries, the geometry of transformations, convexity, advanced Euclidian geometry, inversion, projective geometry, geometric aspects of topology, and non-Euclidean geometries. This edition reflects the recommendations of the COMAP proceedings on Geometry's Future, the NCTM standards, and the Professional Standards for Teaching Mathematics. References to a new companion text, Active Geometry by David A. Thomas encourage students to explore the geometry of motion through the use of computer software. Using Active Geometry at the beginning of various sections allows professors to give students a somewhat more intuitive introduction using current technology before moving on to more abstract concepts and theorems.

Download Modern Geometries ...pdf

Read Online Modern Geometries ...pdf

Modern Geometries

By James R. Smart

Modern Geometries By James R. Smart

This comprehensive, best-selling text focuses on the study of many different geometries -- rather than a single geometry -- and is thoroughly modern in its approach. Each chapter is essentially a short course on one aspect of modern geometry, including finite geometries, the geometry of transformations, convexity, advanced Euclidian geometry, inversion, projective geometry, geometric aspects of topology, and non-Euclidean geometries. This edition reflects the recommendations of the COMAP proceedings on Geometry's Future, the NCTM standards, and the Professional Standards for Teaching Mathematics. References to a new companion text, Active Geometry by David A. Thomas encourage students to explore the geometry of motion through the use of computer software. Using Active Geometry at the beginning of various sections allows professors to give students a somewhat more intuitive introduction using current technology before moving on to more abstract concepts and theorems.

Modern Geometries By James R. Smart Bibliography

- Sales Rank: #434185 in Books
- Brand: Cengage Learning
- Published on: 1997-12-15
- Ingredients: Example Ingredients
- Original language: English
- Number of items: 1
- Dimensions: 9.75" h x 6.75" w x 1.00" l, 1.60 pounds
- Binding: Hardcover
- 480 pages

Download Modern Geometries ...pdf

Read Online Modern Geometries ...pdf

Editorial Review

Review
1. SETS OF AXIOMS AND FINITE GEOMETRIES Introduction to Geometry / Development of Modern Geometries / Introduction to Finite Geometries / Four-Line and Four-Point Geometries / Finite Geometries of Fano and Young / Finite Geometries of Pappus and Desargues / Other Finite Geometries 2. GEOMETRIC TRANSFORMATIONS Introduction to Transformations / Groups of Transformations / Euclidean Motions of the Plane / Sets of Equations for Motions of the Plane / Applications of Transformations in Computer Graphics / Properties of the Group of Euclidean Motions / Motions and Graphics of Three-Space / Similarity Transformations / Introduction to the Geometry of Fractals and Fractal Dimension / Examples and Applications of Fractals 3. CONVEXITY Basic Concepts / Convex Sets and Supporting Lines / Convex Bodies in Two-Space / Convex Bodies in Three-Space / Convex Hulls / Width of a Set / Helly's Theorem and Applications 4. MODERN EUCLIDEAN GEOMETRY, THEORY, AND APPLICATIONS Fundamental Concepts and Theorems / Some Theorems Leading to Modern Synthetic Geometry / The Nine-Point Circle and Early Nineteenth-Century Synthetic Geometry / Isogonal Conjugates / Recent Synthetic Geometry of the Triangle / Golden Ratio, Tessellations, Packing Problems and Pick's Theorem / Extremum Problems, Geometric Probability, Fuzzy Sets, and Bezier Curves 5. CONSTRUCTIONS The Philosophy of Constructions / Constructible Numbers / Constructions in Advanced Euclidean Geometry / Constructions and Impossibility Proofs / Constructions by Paper Folding and by Use of Computer Software / Constructions with Only One Instrument 6. THE TRANSFORMATION OF INVERSION Basic Concepts / Additional Properties and Invariants under Inversion / The Analytic Geometry of Inversion / Some Applications of Inversion 7. PROJECTIVE GEOMETRY Fundamental Concepts / Postulational Basis for Projective Geometry / Duality and Some Consequences / Harmonic Sets / Projective Transformations / Homogenous Coordinates / Equations for Projective Transformations / Special Projectivities / Conics / Constructions of Conics 8. GEOMETRIC INTRODUCTION TO TOPOLOGICAL TRANSFORMATIONS Topological Transformations / Simple Closed Curves / Invariant Points and Networks / Introduction to the Topology of Surfaces / Euler's Formula and the Map-Coloring Problem 9. NON-EUCLIDEAN GEOMETRIES Foundations of Euclidean and Non-Euclidean Geometries / Introduction to Hyperbolic Geometry / Ideal Points and Omega Triangles / Quadrilaterals and Triangles / Pairs of Lines and Area of Triangular Regions / Curves / Elliptic Geometry / Consistency; Other Modern Geometries / APPENDIX 1: SELECTED IDEAS FROM LOGIC / APPENDIX 2: REVIEW OF EUCLIDEAN GEOMETRY / APPENDIX 3: FIRST TWENTY-EIGHT PROPOSITIONS OF EUCLID / APPENDIX 4: HILBERT'S AXIOMS / APPENDIX 5: BIRKHOFF'S POSTULATES / APPENDIX 6: ILLUSTRATIONS OF BASIC EUCLIDEAN CONSTRUCTIONS / BIBLIOGRAPHY / ANSWERS TO SELECTED EXERCISES / INDEX

Users Review

From reader reviews:

Ernest Villa:

A lot of people always spent their free time to vacation or even go to the outside with them friends and family or their friend. Are you aware? Many a lot of people spent that they free time just watching TV, or even playing video games all day long. In order to try to find a new activity this is look different you can read a new book. It is really fun to suit your needs. If you enjoy the book which you read you can spent 24 hours a day to reading a publication. The book Modern Geometries it is rather good to read. There are a lot of those who recommended this book. These folks were enjoying reading this book. Should you did not have

enough space bringing this book you can buy typically the e-book. You can m0ore simply to read this book out of your smart phone. The price is not too costly but this book offers high quality.

Martha Furman:

Reading a book being new life style in this calendar year; every people loves to read a book. When you study a book you can get a wide range of benefit. When you read ebooks, you can improve your knowledge, mainly because book has a lot of information on it. The information that you will get depend on what forms of book that you have read. If you want to get information about your examine, you can read education books, but if you act like you want to entertain yourself you are able to a fiction books, such us novel, comics, as well as soon. The Modern Geometries provide you with a new experience in looking at a book.

Charles Wright:

Don't be worry for anyone who is afraid that this book can filled the space in your house, you may have it in e-book way, more simple and reachable. This particular Modern Geometries can give you a lot of friends because by you checking out this one book you have matter that they don't and make anyone more like an interesting person. That book can be one of one step for you to get success. This reserve offer you information that possibly your friend doesn't realize, by knowing more than various other make you to be great individuals. So , why hesitate? Let's have Modern Geometries.

Roger Alford:

Some people said that they feel fed up when they reading a guide. They are directly felt it when they get a half parts of the book. You can choose the actual book Modern Geometries to make your own reading is interesting. Your own personal skill of reading proficiency is developing when you like reading. Try to choose straightforward book to make you enjoy to see it and mingle the impression about book and studying especially. It is to be 1st opinion for you to like to open up a book and go through it. Beside that the book Modern Geometries can to be your brand new friend when you're feel alone and confuse in what must you're doing of that time.

Download and Read Online Modern Geometries By James R. Smart #K5NPCAVERI8

Read Modern Geometries By James R. Smart for online ebook

Modern Geometries By James R. Smart Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Modern Geometries By James R. Smart books to read online.

Online Modern Geometries By James R. Smart ebook PDF download

Modern Geometries By James R. Smart Doc

Modern Geometries By James R. Smart Mobipocket

Modern Geometries By James R. Smart EPub

K5NPCAVERI8: Modern Geometries By James R. Smart