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	Applications of the Basic Properties; 5.3 Other Formulae for the Area of a Triangle; 5.4 Solutions to the Exercises; 5.5 Problems; 6 Miscellaneous Topics; 6.1 The Three Problems of Antiquity; 6.2 Constructing Segments of Specific Lengths; 6.3 Construction of Regular Polygons; 6.3.1 Construction of the Regular Pentagon; 6.3.2 Construction of Other Regular Polygons; 6.4 Miquel's Theorem; 6.5 Morley's Theorem; 6.6 The Nine-Point Circle; 6.6.1 Special Cases 6.7 The Steiner-Lehmus Theorem6.8 The Circle of Apollonius; 6.9 Solutions to the Exercises; 6.10 Problems; PART II TRANSFORMATIONAL GEOMETRY; 7 The Euclidean Transformations or Isometries; 7.1 Rotations, Reflections, and Translations; 7.2 Mappings and Transformations; 7.2.1 Isometries; 7.3 Using Rotations, Reflections, and Translations; 7.4 Problems; 8 The Algebra of Isometries; 8.1 Basic Algebraic Properties; 8.2 Groups of Isometries; 8.2.1 Direct and Opposite Isometries; 8.3 The Product of Reflections; 8.4 Problems; 9 The Product of Direct Isometries; 9.1 Angles; 9.2 Fixed Points 9.3 The Product of Two Translations9.4 The Product of a Translation and a Rotation; 9.5 The Product of Two Rotations; 9.6 Problems; 10 Symmetry and Groups; 10.1 More About Groups; 10.1.1 Cyclic and Dihedral Groups; 10.2 Leonardo's Theorem; 10.3 Problems; 11 Homotheties; 11.1 The Pantograph; 11.2 Some Basic Properties; 11.2.1 Circles; 11.3 Construction Problems; 11.4 Using Homotheties in Proofs; 11.5 Dilatation; 11.6 Problems; 12 Tessellations; 12.1 Tilings; 12.2 Monohedral Tilings; 12.3 Tiling with Regular Polygons; 12.4 Platonic and Archimedean Tilings; 12.5 Problems PART III INVERSIVE AND PROJECTIVE GEOMETRIES
Sommario/riassunto	"Written by well-known mathematical problem solvers, Modern Geometry features up-to-date and applicable coverage of the wide spectrum of modern geometry and aids readers in learning the art of logical reasoning, modeling, and proof. With its reader-friendly approach, this undergraduate text features: self-contained coverage of modern geometry, provides a large selection of solved exercises to aid in reader comprehension, contains material that can be tailored for a one-, two-, or three-semester sequence, and provides a wide range of fully worked exercises throughout"