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Nota di contenuto	First Part: The Simplest Geometric Formations. I. Line-Segment, Area, Volume as Relative Quantities -- II. The Grassmannian Determinant Principle for the Plane -- III. The Grassmannian Principle for Space -- IV. Classification of the Elementary Configurations of Space According to their Behaviour under Transformation of Rectangular Coordinates -- V. Higher Configurations -- Part Two: Geometric Transformations. I. Affine Transformations -- II. Projective Transformations -- III. Higher Point Transformations -- IV. Transformations with Change of Space Element -- V. Theory of the Imaginary -- Part Three: Systematic Discussion of Geometry and its Foundations. I. The Systematic Discussion -- II. Foundations of Geometry -- Final Chapter: Observations about the Teaching of Geometry. I. The Teaching in England -- II. The Teaching in France -- III. The Teaching in Italy -- IV. Teaching in Germany -- Appendix I -- Appendix II -- Index of Names -- Index of Contents.
Sommario/riassunto	These three volumes constitute the first complete English translation of Felix Klein's seminal series "Elementarmathematik vom höheren Standpunkte aus". "Complete" has a twofold meaning here: First, there now exists a translation of volume III into English, while until today the only translation had been into Chinese. Second, the English versions of

volume I and II had omitted several, even extended parts of the original, while we now present a complete revised translation into modern English. The volumes, first published between 1902 and 1908, are lecture notes of courses that Klein offered to future mathematics teachers, realizing a new form of teacher training that remained valid and effective until today: Klein leads the students to gain a more comprehensive and methodological point of view on school mathematics. The volumes enable us to understand Klein's far-reaching conception of elementarisation, of the "elementary from a higher standpoint", in its implementation for school mathematics. This volume II presents a paradigmatic realisation of Klein's approach of elementarisation for teacher education. It is shown how the various geometries, elaborated particularly since the beginning of the 19th century, are revealed as becoming unified in a new restructured geometry. As Klein put it: "Projective geometry is all geometry". Non-Euclidean geometry proves to constitute a part of this unifying process. The teaching of geometry is discussed in a separate chapter, which provides moreover important information on the history of geometry teaching and an international comparison. About the Author Felix Klein (1849-1925) was a leading German mathematician whose research interests included group theory, complex analysis, and geometry. His work influenced many areas of mathematics and related subjects, ranging from mathematical physics to mathematical didactics. To this day, Felix Klein is considered one of the most important mathematicians of the 19th century.

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