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Nota di contenuto	0. Algebraic Preliminaries -- I. Vector Spaces and Linear Maps -- A. Vector Spaces -- B. Linear Maps -- C. Bases, Dimension -- D. Direct Sums, Quotients -- E. Eigenvectors and Eigenvalues (Part i) -- F. Dual Spaces -- II. Matrices and Determinants -- A. Matrices -- B. Algebras -- C. Determinants, the Laplace Expansion -- D. Inverses, Systems of Equations -- E. Eigenvalues (Part ii) -- III. Rings and Polynomials -- A. Rings -- B. Polynomials -- C. Cayley-Hamilton Theorem -- D. Spectral Theorems -- E. Jordan Form -- IV. Inner Product Spaces -- A. Rn as a Model, Bilinear Forms -- B. Real Inner Product Spaces, Normed Vector Spaces -- C. Complex Inner Product Spaces -- D. Orthogonal and Unitary Groups -- E. Stable Subspaces for Unitary and Orthogonal Groups -- V. Normed Algebras -- A. The Normed Algebras R and C -- B. Some General Results, Quaternions -- C. Alternative and Division Algebras -- D. Cayley-Dickson Process, Hurwitz Theorem.
Sommario/riassunto	Beginning from scratch and developing the standard topics of Linear Algebra, this book is intended as a text for a first course on the subject. The goal to which this work leads is the Theorem of Hurwitz - that the only normed algebras over the real numbers are the real numbers, the complex numbers, the quaternions, and the octonions. Unique in presenting this material at an elementary level, the book stresses the complete logical development of the subject and will provide a bavuable reference for mathematicians in general.