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Sommario/riassunto	This unique and innovative book presents an exciting and complete detail of all the important topics related to the theory of square matrices of order 2. The readers exploring every detailed aspect of matrix theory are gently led toward understanding advanced topics. They will follow every notion of matrix theory with ease, accumulating a thorough understanding of algebraic and geometric aspects of matrices of order 2. The prime jewel of this book is its offering of an unusual collection of problems, theoretically motivated, most of which are new, original, and seeing the light of publication for the first time in the literature. Nearly all of the exercises are presented with detailed solutions and vary in difficulty from easy to more advanced. Many problems are particularly challenging. These, and not only these, invite the reader to unleash their creativity and research capabilities and to discover their own methods of attacking a problem. Matrices have a vast practical importance to mathematics, science, and engineering; therefore the readership of this book is intended to be broad: high

school students wishing to learn the fundamentals of matrix theory, first year students who like to participate in mathematical competitions, graduate students who want to learn more about an application of a certain technique, doctoral students who are preparing for their prelim exams in linear algebra, and linear algebra instructors. Chapters 1–3 complement a standard linear algebra course. Pure and applied mathematicians who use matrix theory for their applications will find this book useful as a refresher. In fact, anyone who is willing to explore the methodologies discussed in this book and work through a collection of problems involving matrices of order 2 will be enriched.