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                      Martin Aigner

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   Nota di contenuto Approximation of Irrational Numbers -- Markov's Theorem and the
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                      Modular Group SL(2,Z) -- The Free Group F2 -- Christoffel Words --
                      Sturmian Words -- Proof of Markov's Theorem -- The Uniqueness
                      Conjecture. .

   Sommario/riassunto This book takes the reader on a mathematical journey, from a number-
                      theoretic point of view, to the realm of Markov's theorem and the
                      uniqueness conjecture, gradually unfolding many beautiful connections
                      until everything falls into place in the proof of Markov's theorem. What
                      makes the Markov theme so attractive is that it appears in an
                      astounding variety of different fields, from number theory to
                      combinatorics, from classical groups and geometry to the world of
                      graphs and words. On the way, there are also introductory forays into
                      some fascinating topics that do not belong to the standard curriculum,
                      such as Farey fractions, modular and free groups, hyperbolic planes,
                      and algebraic words. The book closes with a discussion of the current
                      state of knowledge about the uniqueness conjecture, which remains an
                      open challenge to this day. All the material should be accessible to
                      upper-level undergraduates with some background in number theory,
                      and anything beyond this level is fully explained in the text. This is not
                      a monograph in the usual sense concentrating on a specific topic.
                      Instead, it narrates in five parts – Numbers, Trees, Groups, Words,

Finale – the story of a discovery in one field and its many manifestations in others, as a tribute to a great mathematical achievement and as an intellectual pleasure, contemplating the marvellous unity of all mathematics.