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                       foreword by Ian Stewart

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   Nota di contenuto   Foreword by Ian Stewart -- Preface -- 0 The Beginning of the World --
                       1 The Chinese Rings -- 2 The Classical Tower of Hanoi -- 3 Lucas's
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                       More Pegs -- 6 Variations of the Puzzle -- 7 The Tower of London -- 8
                       Tower of Hanoi Variants with Oriented Disc Moves -- 9 The End of the
                       World -- A Hints and Solutions to Exercises -- Glossary -- Bibliography
                       -- Name Index -- Subject Index -- Symbol Index.

   Sommario/riassunto This is the first comprehensive monograph on the mathematical theory
                       of the solitaire game "The Tower of Hanoi" which was invented in the
                       19th century by the French number theorist Édouard Lucas. The book
                       comprises a survey of the historical development from the game's
                       predecessors up to recent research in mathematics and applications in
                       computer science and psychology. Apart from long-standing myths it
                       contains a thorough, largely self-contained presentation of the
                       essential mathematical facts with complete proofs, including also
                       unpublished material. The main objects of research today are the so-
                       called Hanoi graphs and the related Sierpiski graphs. Acknowledging
                       the great popularity of the topic in computer science, algorithms and
                       their correctness proofs form an essential part of the book. In view of
                       the most important practical applications of the Tower of Hanoi and its
                       variants, namely in physics, network theory, and cognitive (neuro)
                       psychology, other related structures and puzzles like, e.g., the "Tower
                       of London", are addressed. Numerous captivating integer sequences

arise along the way, but also many open questions impose themselves. Central among these is the famed Frame-Stewart conjecture. Despite many attempts to decide it and large-scale numerical experiments supporting its truth, it remains unsettled after more than 70 years and thus demonstrates the timeliness of the topic. Enriched with elaborate illustrations, connections to other puzzles and challenges for the reader in the form of (solved) exercises as well as problems for further exploration, this book is enjoyable reading for students, educators, game enthusiasts and researchers alike.