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Titolo	Fostering Cognitive Mathematics Skills with Matchstick Puzzles : A Guide for Researchers, Teachers, and General Readers / / by Josip Slisko
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Nota di contenuto	Preface -- Introduction -- The History of Matchstick Puzzles -- An Analysis of Previously Incomplete Matchstick Puzzle Solutions -- The Usage of Matchstick Puzzles in Fostering Cognitive Mathematics Skills -- Conlclusion.
Sommario/riassunto	The book presents the history and forms of geometric and arithmetic matchstick puzzles, giving special attention to the different editions of the first book on matchstick puzzles and games, published in 1889 by Sophus Tromholt. Many of the puzzles and solutions from this book appear still today in the same or slightly different forms. One particular puzzle with an erroneous solution is especially interesting. It appeared in a few of the first editions, but later Tromholt excluded it. Nevertheless, posterior book authors continue to repeat that erroneous solution until today. The book also presents which matchstick puzzles appear in books written by authors who used matchstick puzzles before and after Tromholt and famous authors of recreational mathematics. A section of the book is dedicated to commenting on how matchstick puzzles are used in different research fields, from learning

and teaching problem solving to creative thinking. The book critically analyses the past and actual usage of matchstick puzzles with multiple solutions. These puzzles, if properly used, have a great potential to increase cognitive mathematics skills of puzzle solvers of every age. These skills include: Strategic analysis and solution planning Mathematical creativity Critical thinking Avoiding self-imposed cognitive biases Space-visual intelligence Combinatory thinking Unfortunately, when only one solution is given to puzzle solvers, as it is common, the chance for increasing cognitive mathematics skills is lost. As such, this book takes care to highlight the controversial theoretical issue of what are different solutions of a matchstick puzzle.It considers the value of solutions obtained by rotation or mirror reflection for increasing the visual intelligence of puzzle solvers. This book is of interest to researchers in cognitive psychology and educational mathematics who are interested in using matchstick puzzles to explore the relationships between different cognitive skills and levels of performance in solving matchstick puzzles. It is also of interest to mathematics teachers at various educational levels interested in using matchstick puzzles to foster development of cognitive mathematics skills and puzzle posing abilities in their students.