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The mathematics of various entertaining subjects. Research in recreational math. With a foreword by Raymond Smullyan.

Princeton, NJ: Princeton University Press (ISBN 978-0-691-16403-8/hbk; 978-1-4008-8133-8/ebook). xv, 272 p. (2016).

Publisher's description: The history of mathematics is filled with major breakthroughs resulting from solutions to recreational problems. Problems of interest to gamblers led to the modern theory of probability, for example, and surreal numbers were inspired by the game of Go. Yet even with such groundbreaking findings and a wealth of popular-level books exploring puzzles and brainteasers, research in recreational mathematics has often been neglected. This book brings together authors from a variety of specialties to present fascinating problems and solutions in recreational mathematics. Contributors to the book show how sophisticated mathematics can help construct mazes that look like famous people, how the analysis of crossword puzzles has much in common with understanding epidemics, and how the theory of electrical circuits is useful in understanding the classic Towers of Hanoi puzzle. The card game SET is related to the theory of error-correcting codes, and simple tic-tac-toe takes on a new life when played on an affine plane. Inspirations for the book's wealth of problems include board games, card tricks, fake coins, flexagons, pencil puzzles, poker, and so much more. Looking at a plethora of eclectic games and puzzles, the book is sure to entertain, challenge, and inspire academic mathematicians and avid math enthusiasts alike. The articles of this volume will not be indexed individually.

Classification: A20 A80