1. Record Nr. UNINA9910959502203321

Autore	Banks Robert <1922->
Titolo	Towing icebergs, falling dominoes, and other adventures in applied mathematics / / Robert B. Banks
Pubbl/distr/stampa	Princeton, N.J., : Princeton University Press, 2013
ISBN	9781299396395 1299396399 9781400846740 1400846749
Edizione	[Paperback reissue.]
Descrizione fisica	1 online resource (345 p.)
Collana	Princeton Puzzlers
Disciplina	510
Soggetti	Mathematics Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Originally published in hardcover. 1998.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Frontmatter -- Contents -- Preface -- Acknowledgments -- 1. Units and Dimensions and Mach Numbers -- 2. Alligator Eggs and the Federal Debt -- 3. Controlling Growth and Perceiving Spread -- 4. Little Things Falling from the Sky -- 5. Big Things Falling from the Sky -- 6. Towing and Melting Enormous Icebergs: Part I -- 7. Towing and Melting Enormous Icebergs: Part II -- 8. A Better Way to Score the Olympics -- 9. How to Calculate the Economic Energy of a Nation -- 10. How to Start Football Games, and Other Probably Good Ideas -- 11. Gigantic Numbers and Extreme Exponents -- 12. Ups and Downs of Professional Football -- 13. A Tower, a Bridge, and a Beautiful Arch -- 14. Jumping Ropes and Wind Turbines -- 15. The Crisis of the Deficit: Gompertz to the Rescue -- 16. How to Reduce the Population with Differential Equations -- 17. Shot Puts, Basketballs, and Water Fountains -- 18. Balls and Strikes and Home Runs -- 19. Hooks and Slices and Holes in One -- 20. Happy Landings in the Snow -- 21. Water Waves and Falling Dominoes -- 22. Something Shocking about Highway Traffic -- 23. How Tall Will I Grow? -- 24. How Fast Can Runners Run? -- References -- Index
Sommario/riassunto	Although we seldom think of it, our lives are played out in a world of

numbers. Such common activities as throwing baseballs, skipping rope, growing flowers, playing football, measuring savings accounts, and many others are inherently mathematical. So are more speculative problems that are simply fun to ponder in themselves--such as the best way to score Olympic events. Here Robert Banks presents a wide range of musings, both practical and entertaining, that have intrigued him and others: How tall can one grow? Why do we get stuck in traffic? Which football player would have a better chance of breaking away--a small, speedy wide receiver or a huge, slow linebacker? Can California water shortages be alleviated by towing icebergs from Antarctica? What is the fastest the 100-meter dash will ever be run? The book's twenty-four concise chapters, each centered on a real-world phenomenon, are presented in an informal and engaging manner. Banks shows how math and simple reasoning together may produce elegant models that explain everything from the federal debt to the proper technique for ski-jumping. This book, which requires of its readers only a basic understanding of high school or college math, is for anyone fascinated by the workings of mathematics in our everyday lives, as well as its applications to what may be imagined. All will be rewarded with a myriad of interesting problems and the know-how to solve them.Some images inside the book are unavailable due to digital copyright restrictions.