

1. Record Nr.	UNINA9910961982403321
Autore	Havil Julian <1952->
Titolo	Nonplussed! : mathematical proof of implausible ideas // Julian Havil
Pubbl/distr/stampa	Princeton, N.J. ; ; Woodstock, : Princeton University Press, 2010
ISBN	9786612722004 9781400837380 1400837383 9781282722002 128272200X 9780691120560 0691120560
Edizione	[Course Book]
Descrizione fisica	1 online resource (213 p.)
Disciplina	510
Soggetti	Mathematical recreations Mathematics Paradox - Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front matter -- Contents -- Preface -- Acknowledgements -- Introduction -- Chapter 1. Three Tennis Paradoxes -- Chapter 2. The Uphill Roller -- Chapter 3. The Birthday Paradox -- Chapter 4. The Spin of a Table -- Chapter 5. Derangements -- Chapter 6. Conway's Chequerboard Army -- Chapter 7. The Toss of a Needle -- Chapter 8. Torricelli's Trumpet -- Chapter 9. Nontransitive Effects -- Chapter 10. A Pursuit Problem -- Chapter 11. Parrondo's Games -- Chapter 12. Hyperdimensions -- Chapter 13. Friday the 13th -- Chapter 14. Fractran -- The Motifs -- Appendix A. The Inclusion-Exclusion Principle -- Appendix B. The Binomial Inversion Formula -- Appendix C. Surface Area and Arc Length -- Index
Sommario/riassunto	Math--the application of reasonable logic to reasonable assumptions--usually produces reasonable results. But sometimes math generates astonishing paradoxes--conclusions that seem completely unreasonable or just plain impossible but that are nevertheless

demonstrably true. Did you know that a losing sports team can become a winning one by adding worse players than its opponents? Or that the thirteenth of the month is more likely to be a Friday than any other day? Or that cones can roll unaided uphill? In *Nonplussed!*--a delightfully eclectic collection of paradoxes from many different areas of math--popular-math writer Julian Havil reveals the math that shows the truth of these and many other unbelievable ideas. *Nonplussed!* pays special attention to problems from probability and statistics, areas where intuition can easily be wrong. These problems include the vagaries of tennis scoring, what can be deduced from tossing a needle, and disadvantageous games that form winning combinations. Other chapters address everything from the historically important Torricelli's Trumpet to the mind-warping implications of objects that live on high dimensions. Readers learn about the colorful history and people associated with many of these problems in addition to their mathematical proofs. *Nonplussed!* will appeal to anyone with a calculus background who enjoys popular math books or puzzles.

---