

1. Record Nr.	UNINA9910453030403321
Autore	Wells D. G (David G.)
Titolo	Games and mathematics : subtle connections / / David Wells [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2012
ISBN	1-139-88768-8 1-139-56469-2 1-139-54990-1 1-139-17583-1 1-139-55611-8 1-139-55486-7 1-139-55241-4 1-283-74619-0 1-139-55115-9
Descrizione fisica	1 online resource (x, 246 pages) : digital, PDF file(s)
Disciplina	510
Soggetti	Games - Mathematical models Mathematical recreations Mathematics - Psychological aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: Introduction; Part I. Mathematical recreations and abstract games: 1. Recreations from Euler to Lucas; 2. Four abstract games; 3. Mathematics and games: mysterious connections; 4. Why chess is not mathematics; 5. Proving versus checking; Part II. Mathematics: game-like, scientific and perceptual: 6. Game-like mathematics; 7. Euclid and the rules of his geometrical game; 8. New concepts and new objects; 9. Convergent and divergent series; 10. Mathematics becomes game-like; 11. Maths as science; 12. Numbers and sequences; 13. Computers and mathematics; 14. Mathematics and the sciences; 15. Minimum paths from Heron to Feynmann; 16. The foundations: perception, imagination and insight; 17. Structure; 18. Hidden structure, common structure; 19.

Mathematics and beauty; 20. Origins: formality in the everyday world; Bibliography; Index.

Sommario/riassunto

The appeal of games and puzzles is timeless and universal. In this unique book, David Wells explores the fascinating connections between games and mathematics, proving that mathematics is not just about tedious calculation but imagination, insight and intuition. The first part of the book introduces games, puzzles and mathematical recreations, including knight tours on a chessboard. The second part explains how thinking about playing games can mirror the thinking of a mathematician, using scientific investigation, tactics and strategy, and sharp observation. Finally the author considers game-like features found in a wide range of human behaviours, illuminating the role of mathematics and helping to explain why it exists at all. This thought-provoking book is perfect for anyone with a thirst for mathematics and its hidden beauty; a good high school grounding in mathematics is all the background that is required, and the puzzles and games will suit pupils from 14 years.
