

1. Record Nr.	UNINA9910450589403321
Titolo	New visual perspectives on Fibonacci numbers [[electronic resource] /] / K.T. Atanassov ... [et al.]
Pubbl/distr/stampa	River Edge, NJ, : World Scientific, c2002
ISBN	981-277-683-4
Descrizione fisica	1 online resource (331 p.)
Altri autori (Persone)	AtanassovKrassimir T
Disciplina	512.7/2
Soggetti	Fibonacci numbers Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents ; Introduction ; Foreword ; Preface ; PART A. NUMBER THEORETIC PERSPECTIVES ; Section 1. Coupled Recurrence Relations ; 1. Introductory remarks by the first author ; 2. The 2-Fibonacci sequences ; 3. Extensions of the concepts of 2-Fibonacci sequences 4. Other ideas for modification of the Fibonacci sequence Bibliography ; Section 2. Number Trees ; 1. Introduction - Turner's Number Trees ; 2. Generalizations using tableaux ; 3. On Gray codes and coupled recurrence trees ; 4. Studies of node sums on number trees 5. Connections with Pascal-T triangles Bibliography ; PART B. GEOMETRIC PERSPECTIVES ; Section 1. Fibonacci Vector Geometry ; 1. Introduction and elementary results ; 2. Vector sequences from linear recurrences ; 3. The Fibonacci honeycomb plane 5. 4. Fibonacci and Lucas vector polygons ; 6. Trigonometry in the honeycomb plane ; 7. Vector sequences generated in planes ; 7. Fibonacci tracks groups and plus-minus sequences ; Bibliography ; Section 2. Goldpoint Geometry

- ; 1. On goldpoints and golden-mean constructions
- 2. The goldpoint rings of a line-segment
- 3. Some fractals in goldpoint geometry ; 4.
- Triangles and squares marked with goldpoints
- ; 5. Plane tessellations with goldpoint triangles
- ; 6. Tessellations with goldpoint squares ;
- 7. Games with goldpoint tiles ; Bibliography
- ; Index

Sommario/riassunto

This book covers new ground on Fibonacci sequences and the well-known Fibonacci numbers. It will appeal to research mathematicians wishing to advance the new ideas themselves, and to recreational mathematicians, who will enjoy the various visual approaches and the problems inherent in them. There is a continuing emphasis on diagrams, both geometric and combinatorial, which helps to tie disparate topics together, weaving around the unifying themes of the golden mean and various generalizations of the Fibonacci recurrence relation. Very little prior mathematical knowledge is assumed, other th
