

1. Record Nr.	UNISA996384233203316
Titolo	Great York and Albany, or, The loyal welcome to His Royal Highness on his return from Scotland [[electronic resource]] : to the tune of, "Hey boys up go we."
Pubbl/distr/stampa	London, : Printed by Nat. Thompson, 1682
Descrizione fisica	1 sheet ([1] p.) of music
Soggetti	Broadsides17th centuryEnglandLondon
Lingua di pubblicazione	Inglese
Formato	Musica a stampa
Livello bibliografico	Monografia
Note generali	A song. Reproduction of original in Huntington Library.
Sommario/riassunto	eebo-0113

2. Record Nr.	UNINA9910785964703321
Autore	Feldman David P
Titolo	Chaos and Fractals [[electronic resource]] : An Elementary Introduction
Pubbl/distr/stampa	Oxford, : OUP Oxford, 2012
ISBN	1-283-64388-X 0-19-163752-1
Descrizione fisica	1 online resource (431 p.)
Disciplina	515.39
Soggetti	Chaotic behavior in systems Differentiable dynamical systems Fractals
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Cover; Contents; I: Introducing Discrete Dynamical Systems; 0 Opening Remarks; 0.1 Chaos; 0.2 Fractals; 0.3 The Character of Chaos and Fractals; 1 Functions; 1.1 Functions as Actions; 1.2 Functions as a Formula; 1.3 Functions are Deterministic; 1.4 Functions as Graphs; 1.5 Functions as Maps; Exercises; 2 Iterating Functions; 2.1 The Idea of Iteration; 2.2 Some Vocabulary and Notation; 2.3 Iterated Function Notation; 2.4 Algebraic Expressions for Iterated Functions; 2.5 Why Iteration?; Exercises; 3 Qualitative Dynamics: The Fate of the Orbit; 3.1 Dynamical Systems 3.2 Dynamics of the Squaring Function 3.3 The Phase Line; 3.4 Fixed Points via Algebra; 3.5 Fixed Points Graphically; 3.6 Types of Fixed Points; Exercises; 4 Time Series Plots; 4.1 Examples of Time Series Plots; Exercises; 5 Graphical Iteration; 5.1 An Initial Example; 5.2 The Method of Graphical Iteration; 5.3 Further Examples; Exercises; 6 Iterating Linear Functions; 6.1 A Series of Examples; 6.2 Slopes of +1 or -1; Exercises; 7 Population Models; 7.1 Exponential Growth; 7.2 Modifying the Exponential Growth Model; 7.3 The Logistic Equation; 7.4 A Note on the Importance of Stability 7.5 Other r Values Exercises; 8 Newton, Laplace, and Determinism; 8.1 Newton and Universal Mechanics; 8.2 The Enlightenment and Optimism; 8.3 Causality and Laplace's Demon; 8.4 Science Today; 8.5 A

Look Ahead; II: Chaos; 9 Chaos and the Logistic Equation; 9.1 Periodic Behavior; 9.2 Aperiodic Behavior; 9.3 Chaos Defined; 9.4 Implications of Aperiodic Behavior; Exercises; 10 The Butterfly Effect; 10.1 Stable Periodic Behavior; 10.2 Sensitive Dependence on Initial Conditions; 10.3 SDIC Defined; 10.4 Lyapunov Exponents; 10.5 Stretching and Folding; Ingredients for Chaos
 10.6 Chaotic Numerics: The Shadowing Lemma Exercises; 11 The Bifurcation Diagram; 11.1 A Collection of Final-State Diagrams; 11.2 Periodic Windows; 11.3 Bifurcation Diagram Summary; Exercises; 12 Universality; 12.1 Bifurcation Diagrams for Other Functions; 12.2 Universality of Period Doubling; 12.3 Physical Consequences of Universality; 12.4 Renormalization and Universality; 12.5 How are Higher-Dimensional Phenomena Universal?; Exercises; 13 Statistical Stability of Chaos; 13.1 Histograms of Periodic Orbits; 13.2 Histograms of Chaotic Orbits; 13.3 Ergodicity; 13.4 Predictable Unpredictability
 16.6 Fractals, Defined Again

Sommario/riassunto

This book provides the reader with an elementary introduction to chaos and fractals, suitable for students with a background in elementary algebra, without assuming prior coursework in calculus or physics. It introduces the key phenomena of chaos - aperiodicity, sensitive dependence on initial conditions, bifurcations - via simple iterated functions. Fractals are introduced as self-similar geometric objects and analyzed with the self-similarity and box-counting dimensions. After a brief discussion of power laws, subsequent chapters explore Julia Sets and the Mandelbrot Set. The last part of the
