

|                         |   |
|-------------------------|---|
| 1. Record Nr.           | UNINA9910462350903321   |
| Autore                  | Kalman Dan  |
| Titolo                  | Elementary mathematical models [[electronic resource] ] : order aplenty and a glimpse of chaos / / Dan Kalman   |
| Pubbl/distr/stampa      | [Washington, D.C.], : Mathematical Association of America, c1997  |
| ISBN                    | 1-61444-601-6   |
| Descrizione fisica      | 1 online resource (362 p.)  |
| Collana                 | Classroom resource materials  |
| Disciplina              | 511/.8  |
| Soggetti                | Mathematical models<br>Mathematical analysis<br>Electronic books.   |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Note generali           | Includes index.   |
| Nota di contenuto       | <p>""cover ""; ""copyright page""; ""title page""; ""Preface""; ""Teaching EMM""; ""Classroom Experience""; ""Acknowledgments""; ""Contents""; ""1 Overview""; ""An Example""; ""Three Methods: Numerical, Graphical, Theoretical""; ""Mathematical Models""; ""Chaos""; ""Summary""; ""Exercises""; ""Solutions to Selected Exercises""; ""2 Sequences and Difference Equations""; ""Sequences""; ""Difference Equations""; ""The Numerical Approach""; ""The Graphical Approach""; ""The Theoretical Approach""; ""Back to Reality""; ""Sample Difference Equations""; ""Summary""; ""Exercises""</p> <p>""Solutions to Selected Exercises""""3 Arithmetic Growth""; ""The Arithmetic Growth Difference Equation""; ""Examples""; ""Numerical, Graphical, and Theoretical Properties""; ""Proportional Reasoning and Continuous Models""; ""Beyond Arithmetic Growth: Oil Reserves""; ""Summary""; ""Exercises""; ""Solutions to Selected Exercises""; ""4 Linear Graphs, Functions, and Equations""; ""Linear Functions and Equations""; ""Continuous Models""; ""Algebra and Solving Linear Equations""; ""Graphs of Linear Equations""; ""Fitting a Line to Data""; ""Formulating Linear Models""; ""Summary""</p> <p>""Exercises""""Solutions to Selected Exercises""; ""5 Quadratic Growth Models""; ""A New School Population Example""; ""Quadratic Growth Models""; ""Quadratic Growth Difference Equations""; ""Applications of Quadratic Growth""; ""Properties of Quadratic Growth Models""; ""Whole</p> |

Number Sums and sum Notation"; "Summary"; "Exercises";  
"Solutions to Selected Exercises"; "6 Quadratic Graphs, Functions,  
and Equations"; "Quadratic Functions and Equations"; "Algebraic  
Considerations"; "Graphs"; "Solving Equations"; "An Example";  
"Summary"; "Exercises"  
"Solutions to Selected Exercises"7 Polynomial and Rational  
Functions"; "Algebraic Aspects of Polynomials"; "Graphing  
Polynomials"; "Solving Polynomial Equations"; "Applications of  
Polynomials"; "Graphs of Rational Functions"; "Summary";  
"Exercises"; "Solutions to Selected Exercises"; "8 Fitting a Line to  
Data"; "Defining ``Best''"; "An Error Function"; "Finding the Best  
Slope"; "Three-Dimensional Parabolas"; "Summary"; "Exercises";  
"Solutions to Selected Exercises"; "9 Geometric Growth"; "The  
Geometric Growth Assumption"  
"The Geometric Growth Difference Equation"Functional Equation";  
"Exponential Functions"; "Additional Applications"; "Summary";  
"Exercises"; "Solutions to Selected Exercises"; "10 Exponential  
Functions"; "Graphs"; "Algebraic Properties"; "Solving Equations";  
"The number e"; "Summary"; "Exercises"; "Solutions to Selected  
Exercises"; "11 More On Logarithms"; "Rules for Logarithms";  
"Logarithmic Scales"; "The pH Scale"; "Transforming Data";  
"Summary"; "Exercises"; "Solutions to Selected Exercises"; "12  
Geometric Sums and Mixed Models"  
"Geometric Sums"

---