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| Autore                  | Herz-Fischler Roger <1940->                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Titolo                  | A mathematical history of the golden number [[electronic resource] /] / Roger Herz-Fischler                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| Descrizione fisica      | 1 online resource (738 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Collana                 | Dover Books on Mathematics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Disciplina              | 512.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Soggetti                | Ratio and proportion - History<br>Geometry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| Note generali           | Originally published: A mathematical history of division in extreme and mean ratio. Waterloo, Ont., Canada : Wilfrid Laurier University Press, c1987.<br>"Incorporates ... a new preface and a section of 'Corrections and additions,' both prepared specially for this edition by the author"--T.p. verso.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| Nota di contenuto       | Cover; Title Page; Copyright Page; Contents; Preface to the Dover Edition; Foreword; A Guide for Readers; A. Internal Organization; B. Bibliographical Details; C. Abbreviations; D. Symbols; E. Dates; F. Quotations from Primary Sources; Introduction; Chapter I. The Euclidean Text; Section 1. The Text; Section 2. An Examination of the Euclidean Text; A. Preliminary Observations; B. A Proposal Concerning the Origin of DEMR; C. Theorem XIII,8; D. Theorems XIII,1-5; E. Stages in the Development of DEMR in Book XIII; Chapter II. Mathematical Topics; Section 3. Complements and the Gnomon<br>Section 4. Transformation of Areas<br>Section 5. Geometrical Algebra, Application of Areas, and Solutions of Equations; A. Geometrical Algebra-Level 1; B. Geometrical Algebra-Level 2; C. Application of Areas-Level 3; D. Historical References; E. Setting Out the Debate; F. Other Interpretations in Terms of Equations; G. Problems in Interpretation; H. Division of Figures; I. Theorems VI,28,29 vs 11,5,6; J. Euclid's Data; K. Theorem II,11; L. II,11-Application of Areas, Various Views; i. Szabo; ii. Junge; iii. Valabrega-Gibellato; Section 6. Side and |

Diagonal Numbers; Section 7. Incommensurability  
 Section 8. The Euclidean Algorithm, Anthyphairesis, and Continued Fractions  
 Chapter III. Examples of The Pentagon, Pentagram, and Dodecahedron Before -400; Section 9. Examples before Pythagoras (before c. -550); A. Prehistoric Egypt; B. Prehistoric Mesopotamia; C. Sumerian and Akkadian Cuneiform Ideograms; i. Fuye's Theory; D. A Babylonian Approximation for the Area of the Pentagon; i. Stapleton's Theory; E. Palestine; Section 10. From Pythagoras until -400; A. Vases from Greece and its Italian Colonies, Etruria (Italy); B. Shield Devices on Vases; C. Coins; D. Dodecahedra  
 E. Additional Material  
 Conclusions; Chapter IV. The Pythagoreans; i. Pythagoras; ii. Hippasus; iii. Hippocrates of Chios; iv. Theodorus of Cyrene; v. Archytas; Section 11. Ancient References to the Pythagoreans; A. The Pentagon as a Symbol of the Pythagoreans; B. The Pythagoreans and the Construction of the Dodecahedron; C. Other References to the Pythagoreans; Section 12. Theories Linking DEMR with the Pythagoreans; i. The Pentagon; ii. Scholia Assigning Book IV to the Pythagoreans; iii. Equations and Application of Areas; iv. The Dodecahedron  
 v. A Marked Straight-Edge Construction of the Pentagon  
 vi. A Gnomon Theory; vii. Allman's Theory: The Discovery of Incommensurability; viii. Fritz-Junge Theory: The Discovery of Incommensurability; ix. Heller's Theory: The Discovery of DEMR; x. Neuenschwander's Analysis; xi. Stapleton; Chapter V. Miscellaneous Theories; Section 13. Miscellaneous Theories; i. Michel; ii. Fowler: An Anthyphairesis Development of DEMR; iii. Knorr: Anthyphairesis and DEMR; iv. Itard: Theorem IX,15; Section 14. Theorems XIII,1-5; i. Bretschneider; ii. Allman; iii. Michel; iv. Dijksterhuis and Van der Waerden  
 v. Lasserre

## Sommario/riassunto

<DIV>A comprehensive study of the historic development of division in extreme and mean ratio ("the golden number"), this text traces the concept's development from its first appearance in Euclid's <I>Elements</I> through the 18th century. The coherent but rigorous presentation offers clear explanations of DEMR's historical transmission and features numerous illustrations.<BR></DIV>