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| Nota di contenuto | <p>Intro -- Title Page -- Copyright -- Preface -- Changes from the Second Edition -- Elementary Texts on the History of Mathematics -- Part I: What is Mathematics? -- Contents of Part I -- Chapter 1: Mathematics and its History -- 1.1 Two Ways to Look at the History of Mathematics -- 1.2 The Origin of Mathematics -- 1.3 The Philosophy of Mathematics -- 1.4 Our Approach to the History of Mathematics -- Questions for Reflection -- Chapter 2: Proto-mathematics -- 2.1 Number -- 2.2 Shape -- 2.3 Symbols -- 2.4 Mathematical Reasoning -- Problems and Questions -- Part II: The Middle East, 2000-1500 BCE -- Contents of Part II -- Chapter 3: Overview of Mesopotamian Mathematics -- 3.1 A Sketch of Two Millennia of Mesopotamian History -- 3.2 Mathematical Cuneiform Tablets -- 3.3 Systems of Measuring and Counting -- 3.4 The Mesopotamian Numbering System -- Problems and Questions -- Chapter 4: Computations in Ancient Mesopotamia -- 4.1 Arithmetic -- 4.2 Algebra -- Problems and Questions -- Chapter 5: Geometry in Mesopotamia -- 5.1 The Pythagorean Theorem -- 5.2 Plane Figures -- 5.3 Volumes -- 5.4 Plimpton 322 -- Problems and Questions -- Chapter 6: Egyptian Numerals and Arithmetic -- 6.1 Sources -- 6.2 The Rhind Papyrus -- 6.3 Egyptian Arithmetic -- 6.4 Computation -- Problems and Questions -- Chapter 7: Algebra and Geometry in Ancient Egypt -- 7.1 Algebra Problems in the Rhind Papyrus -- 7.2 Geometry -- 7.3 Areas</p> |

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Sommario/riassunto

Praise for the Second Edition "An amazing assemblage of worldwide contributions in mathematics and, in addition to use as a course book, a valuable resource . . . essential." -CHOICE This Third Edition of The History of Mathematics examines the elementary arithmetic, geometry, and algebra of numerous cultures, tracing their usage from Mesopotamia, Egypt, Greece, India, China, and Japan all the way to Europe during the Medieval and Renaissance periods where calculus was developed. Aimed primarily at undergraduate students studying the history of mathematics for science, engineering, and secondary education, the book focuses on three main ideas: the facts of who, what, when, and where major advances in mathematics took place; the type of mathematics involved at the time; and the integration of this information into a coherent picture of the development of mathematics. In addition, the book features carefully designed problems that guide readers to a fuller understanding of the relevant mathematics and its social and historical context. Chapter-end exercises, numerous photographs, and a listing of related websites are also included for readers who wish to pursue a specialized topic in more depth. Additional features of The History of Mathematics, Third Edition include: Material arranged in a chronological and cultural context Specific parts of the history of mathematics presented as individual lessons New and revised exercises ranging between technical, factual, and integrative Individual PowerPoint presentations for each chapter and a bank of homework and test questions (in addition to the exercises in the book) An emphasis on geography, culture, and mathematics In addition to being an ideal coursebook for undergraduate students, the book also serves as a fascinating reference for mathematically inclined individuals who are interested in learning about the history of mathematics.
