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Titolo	Cultures of computation and quantification in the ancient world : numbers, measurements, and operations in documents from Mesopotamia, China and South Asia / / edited Karine Chemla, Agathe Keller, and Christine Proust
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Nota di contenuto	Chapter 1. Cultures of computation and quantification in the ancient world: An introduction (Karine Chemla, in dialogue with Agathe Keller and Christine Proust) -- Part 1: Shaping quantities and relating them to numbers -- Chapter 2. Carrying bricks and bundling reed in theory and practice (Wolfgang Heimpel) -- Chapter 3. Measuring grain in early Bronze Age Mesopotamia: Form, use, and control of the bariga container in the Twenty-First Century BCE (Walther Sallaberger) -- Chapter 4. Volume, brickage and capacity in old Babylonian mathematical texts from Southern Mesopotamia (Christine Proust) -- Part 2: Interpreting numbers and quantities in texts -- Place value notations in the Ur III period: Marginal numbers in administrative texts (Ouyang Xiaoli and Christine Proust) -- Chapter 6. The Nazbalum in old Babylonian Mesopotamia (Robert Middeke-Conlin) -- Part 3. Working with operations and algorithms -- Chapter 7. Computing tools and representations of arithmetic (Baptiste Mèlès) -- Chapter 8. Working on and with division in early China, Third Century BCE—Seventh Century CE (Karine Chemla) -- Chapter 9. Multiplying integers: On the diverse practices of medieval Sanskrit authors (Agathe Keller and Catherine Morice-Singh) -- Part 4. Different cultures of computation and quantification -- Chapter 10. Another culture of computation from 7th century China (Zhu Yiwen) -- Chapter 11. The characteristics of

mathematical methods in the Wu Cao Suanjing and its social background (Zou Dahai and Chen Wei) -- Chapter 12. Weighing units and weights in the context of trade between upper Mesopotamia and Anatolia (Nineteenth and Eighteenth Centuries BCE) (Cécile Michel) -- Chapter 13. Quantification and computation in the mathematical texts of old Babylonian Diyala (Carlos Gonçalves) -- Index. .

Sommario/riassunto

This book sheds light on the variety of mathematical cultures in general. To do so, it concentrates on cultures of computation and quantification in the ancient world, mainly in ancient China, South Asia, and the Ancient Near East and offers case studies focused on numbers, quantities, and operations, in particular in relation to mathematics as well as administrative and economic activities. The various chapters focus on the different ways and contexts of shaping numbers and quantities, and on the procedures applied to them. The book places special emphasis on the processes of emergence of place-value number systems, evidenced in the three geographical areas under study. All these features yield essential elements that will enable historians of mathematics to further capture the diversity of computation practices in their contexts, whereas previous historical approaches have tended to emphasize elements that displayed uniformity within "civilizational" blocks. The book includes editions and translations of texts, some of them published here for the first time, maps, and conventions for editions of ancient texts. It thereby offers primary sources and methodological tools for teaching and learning. The volume is aimed at historians and philosophers of science and mathematics, historians of the ancient worlds, historians of economics, sinologists, indologists, assyriologists, as well as undergraduate, graduate students and teachers in mathematics, the history and philosophy of science and mathematics, and in the history of ancient worlds.
