

MR2368469 (2009a:01003) 01-06 (01A05)

★**The mathematics of Egypt, Mesopotamia, China, India, and Islam.**

A sourcebook.

Edited by Victor Katz.

Princeton University Press, Princeton, NJ, 2007. *xvi*+685 pp. \$75.00.

ISBN 978-0-691-11485-9; 0-691-11485-4

The single chapters of the volume are written by some of the best scholars available for each field: Annette Imhausen (Egypt), Eleanor Robson (Mesopotamia), Joseph Dauben (China), Kim Plofker (India), Lennart Berggren (Medieval Islam). The general quality of the volume is as one might expect from this list.

The almost 700 pages allow a broad presentation of each culture. The volume being a source book, translated original sources—sometimes translated by the authors from the original language, sometimes rendering earlier translations or using but correcting them—constitute its bulk; often, very extensive extracts are offered. The general and accompanying commentaries, however, also present a basic history of the mathematics of each area.

The sources are chosen so as to reflect the socio-cultural situation and the breadth of the mathematical endeavour in the various cultures; along with mathematics *stricto sensu* we therefore find texts speaking *about* mathematics, from the Middle Kingdom “satirical letter” about the computational tasks of scribes (Papyrus Anastasi I) to Matteo Ricci’s and Xu Guangxi’s introduction to their translation of the *Elements* and al-Kūhī’s statement of the certainty of mathematics.

According to the preface (pp. ix*f.*), the book is “aimed at those having knowledge of mathematics at least equivalent to a U.S. mathematics major. Thus, the intended audience of the book includes students studying mathematics and the history of mathematics, mathematics teachers at all levels, mathematicians, and historians of mathematics.” Since few of these can be expected to be familiar in advance with the very different ways in which the five cultures express mathematics, the sources are accompanied with mathematical explanations, rather than being translated into an idiom close to modern mathematics. At times (thus at least the impression of the reviewer) these explanations are so terse or reserved for the advanced level that mathematics teachers who want to use the material (and therefore need to understand every detail) will have to work hard. This is not necessarily a pedagogical disadvantage—the volume is certainly not one of those mirrors into which a modern mathematician may look in order to see nothing but his own face.

The reasonable price of the book is unfortunately reflected in the material quality, at least of the reviewer’s copy—it is close to breaking after one reading and asks for rebinding. It must be hoped that the paperback edition, if/when it appears, will withstand the tear and wear which the book deserves.

Reviewed by *Jens Høyrup*