

But there is an intellectual criterion which is ultimate, which differs from those others which seek the value of a theory outside the theory itself. It is the judgment of its esthetic worth, the appreciation of its structure. It is perhaps more noteworthy that dynamical theory should have acquired a value of this sort than, for example, projective geometry, or the theory of groups. And to our author more perhaps than to any other man belongs the credit that this is so.

B. O. KOOPMAN

THE RHIND PAPYRUS

The Rhind Mathematical Papyrus, British Museum 10057 and 10058, in two volumes. Volume I. By Arnold Buffum Chace, with the assistance of Henry Parker Manning, and with a bibliography of Egyptian mathematics by Raymond Clare Archibald. [x]+210 pp., 1927. Royal 8vo. Volume II. By Arnold Buffum Chace, Ludlow Bull, and Henry Parker Manning, with a bibliography of Egyptian and Babylonian mathematics (supplement) by Raymond Clare Archibald, and a description of the mathematical leather roll in the British Museum, by S. R. K. Glanville. Mathematical Association of America, Oberlin, Ohio; xvi pp. +31 photographic plates +109 facsimile plates +109 facing pages of text, 12 pp. of bibliography +8 pp., 1929. Royal oblong folio. Price, \$20.

The publication of this treatise, the product of nearly twenty years of scholarly work, is an event of such importance in connection with the history of mathematics as to require more than a cursory examination or a brief description. The Rhind (Ahmes, A'h-mosè) Papyrus is the most extensive mathematical treatise written before the sixteenth century B. C. that has come down to us. We have no contemporary manuscripts of any of the Greek classics on geometry, the theory of numbers, or computation. Our knowledge of the Sumerian, Assyrian, Babylonian, and Chaldean mathematics is derived solely from numerical tables, a few tablets containing a little work in mensuration, numerous others relating to commercial life, and some recently studied ones relating to the Pythagorean triangle, the angle inscribed in a semi-circle, and the rule for solving the quadratic. Such Chinese and Hindu sources as we have, relating to the pre-Christian period, are of uncertain authenticity, especially those purporting to be copies of Chinese documents preceding the eleventh century B. C. In the case of Egypt, however, we have, in fairly complete form, the original document written by A'h-mosè (Ahmes) in the reign of 'A-user-Ré' (c. 1650 B. C.), being a copy or a paraphrase of one dating from the reign of Ne-ma 'et-Ré' (Amen-em-hât III), 1849-1801 B. C., or at least similar to it. That such a document, written more than a thousand years before mathematics began to make any noteworthy advance in Greek territory, should have come down to us almost intact, is one of the most remarkable incidents connected with source material of any kind. It is also interesting to know that another manuscript, even earlier than this, is soon to be published, the Golenishchev papyrus now in Moscow (*Quellen und Studien zur Geschichte der Mathematik, Abteilung A: Quellen*, Berlin, 1930),