ABSTRACTS

The purpose of the abstracts is to give sufficient information about the subject matter of each publication to enable readers to decide whether to read it. No review or evaluation is intended. Printing is arranged so that individual entries may be cut or mounted for filing in a five-by-three inch system. The indexing terms (in boldface capitals) refer only to aspects of the publication of interest to historians of mathematics, including some topics in general history of science and historiography, but not other topics unless there is a fairly close link with mathematics or its history. We hope to publish cumulative subject indices.

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MR 46 #3255 means that the item is numbered 3255 in volume 46 of Mathematical Reviews. RZ 1973 #3A14 means that the item is numbered 3A14 in the third number of the 1973 volume of the Referativny Zhurnal. Z 50 4 means volume 50, page 4 of the Zentralblatt.

The symbol * in the margin indicates a publication that deserves more discussion that it may ordinarily get in the Review Department (either because it is an article rather than a book or because it is such a large book that a single review cannot deal with it fully). Readers are invited to comment by letter for our Correspondence Department and by submitting manuscripts of reviews or articles.

BIRKHOFF, Garrett 1975 Mathematics and computer science American Scientist 63, 83-91 PURE AND APPLIED MATHEMATICS. AUTOMATA. ARTIFICIAL INTELLIGENCE.
Subtitle: "Skillful combinations of mathematics and COMPUTER SCIENCE hold great promise for the future."

GITTLEMAN, Arthur 1975 History of Mathematics Columbus, Ohio (Charles E. Merrill) 301 p A HISTORY OF MATHEMATICS TEXT for secondary schools and junior colleges, dealing with elementary mathematics through the XVIII century, and 42 pages on mathematics since then. Problems, suggested further reading and projects, guide to name pronunciation, bibliography.
HAWKINS, Thomas 1975 Cauchy and the spectral theory of matrices Historia Mathematica 2, 1-29 A L CAUCHY. EIGENVALUES. MATRIX THEORY. SPECTRAL THEORY. XVII. XVIII.

VAN DER WAERDEN, B L 1975 On the sources of my book Moderne Algebra HM 2, 31-40 A detailed account of the sources (above all E NOETHER, and also E STEINITZ, F S MACAULAY, R DEDEKIND, H WEBER, E ARTIN, O SCHMIDT, O SCHREIER, and others) of this CLASSIC TEXTBOOK that greatly influenced RESEARCH and UNDERGRADUATE EDUCATION in ABSTRACT ALGEBRA.

LE VAN THIEM 1975 Report on mathematics in Viet Nam HM 2, 41-42 MATHEMATICAL POLICY. SOCIOLOGY OF MATHEMATICS. VIETNAM.


MAC LANE, Saunders 1975 A proposed "mini-study" of mathematical developments HM 2, 59-61 HISTORICAL PROJECTS. The president of the American Mathematical Society proposes a volume of commissioned topical historical studies intended "to clarify in some measure the nature and future of mathematics."

MOORE, Gregory H 1975 A prospective biography of Ernst Zermelo (1871-1953) HM 2, 62-63 E ZERMELO. PORTRAIT.

PEPPER, Jon V 1975 The proposed edition of the life and works of Thomas Harriot (1560-1621) HM 2, 64-65 THOMAS HARRIOT.

KIMBERLING, Clark 1975 Mathematical aspects of music HM 2, 65 MUSIC. A query.
ROZENFELD, Boris A 1975 A medieval physico-mathematical newly discovered in the Kuibyshev regional library

ARAB MATHEMATICS. ASTRONOMY. OPTICS.

Describes hitherto lost MANUSCRIPTS relating to AL-KASHI, NASIR AL-DIN AL-TUSI, ALHAZEN (AL-HAYTHAM), and others.

PATTERSON, Andrew M 1975 The Leonard J. Savage papers

ARCHIVES. YALE UNIVERSITY LIBRARY.

GUPTA, R C 1975 History of mathematics at a summer school in India

EDUCATION IN HISTORY OF MATHEMATICS. HISTORY IN EDUCATION. MEETINGS.


INTERNATIONAL COMMISSION ON THE HISTORY OF MATHEMATICS.

BERGGREN, J L 1975 International Congress of Mathematics 1974

MEETINGS.

GUPTA, R C 1975 Seminar on Jaina studies

JAINA MATHEMATICS. MEETINGS.

LEWIS, Albert C 1975 Bringing modern mathematics to bear on historical research

HISTORIOGRAPHY OF MATHEMATICS.

GAIDUK, Yu M 1975 Further references on Wilbraham and Gibbs phenomenon

WILBRAHAM. GIBBS PHENOMENON.
GURALNICK, Stanley M 1974 Sources of misconception on the role of science in the nineteenth-century American college Isis 65, 352-366 UNDERGRADUATE EDUCATION. Argues that the role of science (including mathematics) in the liberal arts college in the USA in the XIX has been underestimated.

POTTAGE, John 1974 The mensuration of quadrilaterals and the generation of Pythagorean triads: A mathematical, heuristic and historical study, with special reference to Brahmagupta's rules Archive for the History of Exact Sciences 12(4), 291-298 ARYABHATA I. BHASKARA II. BRAHMAGUPTA. EGYPTIAN MATHEMATICS. HEURISTIC. INDIAN MATHEMATICS. PYTHAGOREAN TRIANGLES. TRIANGLES AREA. Discussion centers on the rules giving the area in terms of the sides by \((a + c)(b + d)/2\) and the square root of \((s-a)(s-b)(s-c)(s-d)\).


ROBBINS, Herbert 1974 The statistical mode of thought; in Neyman, The Heritage of Copernicus..., 419-431 PROBABILITY. STATISTICS.

KAC, M 1974 The emergence of statistical thought in exact sciences; in Neyman, The Heritage of Copernicus..., 433-444 PROBABILITY in PHYSICS. STATISTICS.

COCHRAN, W G 1974 The vital role of randomization in experiments and surveys; in Neyman, The Heritage of Copernicus..., 445-563 EXPERIMENTAL DESIGN. STATISTICS.

DEDRON, P & J ITARD Mathematics and Mathematicians Translated by J V Field from Mathématiques et Mathématiciens (Paris, 1959) London (Transworld Publishers) 2 volumes, paperback 325 + 222 p £1.50 + £1.00 A GENERAL HISTORY and SOURCE BOOK on ANCIENT, MEDIEVAL, RENAISSANCE, XVII and XVIII century mathematics in vol. 1 and on NUMERATION, ALGEBRA, LINEAR EQUATIONS, QUADRATIC EQUATIONS, PYTHAGOREAN THEOREM, TRIGONOMETRY, DELIAN PROBLEM, ANGLE TRISECTION and CIRCLE SQUARING in vol. 2. Subject and person indexes. The translation was arranged (for use as a TEXT in a course in Britain's Open University) by Graham Flegg, who writes a foreword.

FELIX, Lucienne, editor 1974 Message d'un mathématicien: Henri Lebesgue pour le centennaire de sa naissance [Message from a Mathematician: HENRI LEBESGUE on the centenary of his birth] Paris (Albert Blancard) 259 p 65 F SELECTED WORKS. Preface by S. Mandelbrojt, BIOGRAPHY and running commentary by the editor with extracts from published and manuscript material on PHILOSOPHY, RESEARCH, HEURISTIC, HISTORY, EDUCATION PEDAGOGY, TEACHER TRAINING; PHOTOGRAPHS, manuscript FACSIMILES.

SHEYNIN, O B 1974 On the prehistory of the theory of probability Archive for the History of Exact Sciences 12(2), 97-141 PROBABILITY in ANCIENT, MEDIEVAL, and RENAISSANCE PERIODS, in GREEK and ARAB MATHEMATICS, in MEDICINE, ART, BIOLOGY, JURISPRUDENCE, GAMBLING, ASTROLOGY, ASTRONOMY, and PHILOSOPHY up to the XVII century.

**HISTORIOGRAPHY. COSMOLOGY.** Preface by Harrison Brown and 25 essays on SCIENTIFIC REVOLUTIONS in ASTRONOMY, COSMOLOGY, BIOLOGY, CHEMISTRY, PHYSICS, MATHEMATICS, PROBABILITY AND CAUSATION, TECHNOLOGY. Essays particularly relevant to mathematics are abstracted below. The initial essay by the editor (Introduction: Nicholas Copernicus (Mikolaj Kopernik): An intellectual revolutionary) gives a biographical sketch, discusses the essence of the COPERNICAN REVOLUTION and defines a "quasi-Copernican revolution" as one of lesser scope.

SACHS, Rainer K 1974 Relativity; in Neyman, *The Heritage of Copernicus...*, 297-309 A EINSTEIN.

LUKACS, Eugene 1974 Non-Euclidean geometry; in Neyman, *The Heritage of Copernicus...*, 359-377 J BOLYAI. EUCLID. N LOBACHEVSKII. NON-EUCLIDEAN GEOMETRY.

ULAM, S M 1974 Infinities; in Neyman, *The Heritage of Copernicus...*, 378-393 G CANTOR. K GÖDEL. INFINITY. NOTATION. SET THEORY. UNDECIDABILITY. The author asserts that REVOLUTIONS IN MATHEMATICS do occur: "Very deep 'conceptual changes' occur in mathematics from time to time, altering its very basis, its philosophical impact, its future impact on other sciences and the psychology at the root of creative intuitions." (p. 378)

HAMMERSLEY, J M 1974 The technology of thought; in Neyman, *The Heritage of Copernicus...*, 394-415 An essay on the nature of TECHNOLOGY, the role of mathematical symbolism (NOTATION), G BOOLE as a pioneer of COMPUTERS, C BABBAGE and SCIENTIFIC REVOLUTIONS. ("A COPERNICAN REVOLUTION is a major advance in human understanding made by one man against a dogmatic consensus of contrary preconceptions" -- p. 403)
MAY, Kenneth O. 1974 History in the mathematics curriculum. *Amer. Math. Monthly* 81, 899-901. HISTORY IN MATHEMATICS EDUCATION. Undergraduate courses at four levels and two doctoral programs centered around the history of mathematics. (H.S. Tropp)

HOBBES, Thomas 1974(1658) *De homine. Traité de l'homme* Translated with introduction and commentary by Paul-Marie Maurin, preface by Vasco Ronchi. Fondazione Giorgio Ronchi XIII Paris (Blanchard) 206 p 30 F. Eight of 15 chapters and 100 of 162 pages of the text itself are on OPTICS, PERSPECTIVE and VISION. One of two appendices is on his theory of vision.

SALZER, Herbert E. 1974 Two letters from Einstein concerning his distant parallelism field theory. *Arch. History Exact Sci.* 11(1), 89-96. A EINSTEIN. FIELD THEORY. RELATIVITY.


KOCHINA, P Ya 1974 Vospominaniya [REMINISCENCES] Moscow (Nauka) 299 p RUSSIA. USSR. XX. AUTOBIOGRAPHY of PELAGEYA YAKOVLEVNA KOCHINA (1889- ), academician of the USSR SCIENCE ACADEMY, hero of socialist labor, researcher and teacher in HYDRODYNAMICS and APPLIED MATHEMATICS, activist in politics, the women's and peace movements, and biographer of SOFYA KOVALEVSKYA. Many drawings by the author, photographs of family and friends, and PORTRAITS of mathematicians and others. The name index, which lists "only those persons about whom I wish and am able to give supplementary information," mentions 64 Russian and 16 other mathematicians, 102 Russian and 13 other scientists, 51 Russian and 9 other personalities, including A A FRIDMAN, N E KOCHINA (her husband), V I SMIRNOV, I M VINOGRADOV, S A CHAPLYGIN, S I VAVILOV, G M KRZHIZHANOVSKI, M A LAVRENTEV, JEFFREY TAYLOR, T VON KARMAN, L V KANTOROVICH, A N KOLMOGOROV, etc. The editor, A Yu Ishlinskii, remarks with regret that "our mathematicians and mechanicians almost never write memoirs" and mentions those of A N Krylov (Moscow 1956) as the exception.

UNGURU, Sabetai 1974 Pappus in the thirteenth century in the Latin West Arch. History Exact Sci. 13(4), 307-324 The author argues that the Collectio of PAPPUS OF ALEXANDRIA (contrary to previous consensus) was available in MEDIEVAL times and, in particular, in the XIII century to WITELO, as indicated by textual comparisons. The author cites his unpublished 1970 University of Wisconsin thesis Witelo as a mathematician: a study in XIIIth century mathematics including a critical edition and English translation of the mathematical book of Witelo's PERSPECTIVE.

NOVY, Lubos 1974 *Acta historiae rerum naturalium necnon technicarum*, Special Issue 4, Prague 235 p. INTERNATIONAL CONGRESSES OF THE HISTORY OF SCIENCE. In a brief note and preface the editor explains that the 6th and 7th issues of *Acta historiae* are prepared in connection with the XIVth International Congress of the History of Science meeting in Japan in August, 1974. This issue contains contributions of Czech historians to the XIVth Congress, presented here rather than in person because of the difficulty of the distance to Tokyo. The *Acta historiae* is described as a supplement to the *Journal DVT-Dejiny ved a techniky*. Papers relating to mathematics are abstracted below.

BERAN, Jiri 1974 The Royal Bohemian Society of Sciences and the Czech Academy of Sciences and Arts (Founding of a national academy within the Habsburg monarchy) [English with Russian summary] *Acta his rer nat nec tec*, Spec 7, 128-144 BOHEMIA. CZECHOSLOVAKIA. SCIENTIFIC SOCIETIES. XIX.


HM2 Abstracts 233

FREUDENTHAL, H 1974 *Mathematics as an Educational Task*
Dordrecht (D. Reidel) 692 p Paper $19.50

Primarily an essay in the PHILOSOPHY of mathematical EDUCATION
with initial chapters on "the mathematical tradition," "mathematics today," and "tradition and education."

BIBLIOGRAPHY of 35 related publications by the author.


RABINOVITCH, Nachum L 1974 Early antecedents of error theory
*Arch. History Exact Sci.* (4), 348-358

METROLOGY. PROBABILITY. STATISTICS. Argues that considerations of ERROR THEORY go back to ancient times as illustrated in ANCIENT and MEDIEVAL HEBREW sources, and that GALILEO systematized familiar ideas rather than creating a new theory.

PEDOE, Daniel 1974 Albrecht Dürer and the ellipse
*Austral. Math Teach.* 30(6), 222-226

A DURER's egg-shaped ELLIPSE conjectured to be a woodcut error rather than a MATHEMATICAL MISTAKE.

GREENBERG, Marvin J 1974 *Euclidean and Non-Euclidean Geometries. Development and History*
San Francisco (W H Freeman) 304 p A TEXTBOOK WITH HISTORICAL APPROACH to NONEUCLIDEAN GEOMETRY with some discussion of PHILOSOPHY OF MATHEMATICS and bibliography for further reading. Written for future teachers, math majors (challenging exercises) and liberal arts students.

LUCAS, Edouard 1974(1895) *L'Arithmétique amusante*
[Arithmetical Recreations] 266 p 22 F A classic collection of elementary PUZZLES and other MATHEMATICAL RECREATIONS in ARITHMETIC published posthumously by H Delannoy, C-A Laisant, and E Lemoine with notes on NUMERATION, MATHEMATICAL GAMES, THE KNIGHT'S TOUR, THE EIGHT QUEENS, MAGIC SQUARES and MAGIC CUBES, etc., in order to complete the publication of all that wrote on the subject.

FOURCHER DE CAREIL. C HUYGENS. G W LEIBNIZ.
CALCULUS. KINEMATICS. KINETICS. MANUSCRIPTS.
Two texts, "Essay on dynamics" (24 pp. in original French with English translation) and "The general rule for the compounding of motions" (4 pp. in original French with a later published version) discovered by Costabel in 1956 and here presented with extended commentary.


GROUP THEORY. LINEAR ALGEBRA. (D E Kullman)

TZELEKIS, C P 1973 *English-Greek Mathematical Dictionary*. Athens (Athens Publishing Center) 235 p. This dictionary is evidently intended to help Greek students and mathematicians read modern mathematical works in English. The 7800 entries cover secondary and college mathematics plus a selection from advanced topics. Appendices give English readings of numerals, abbreviations, and special symbols.

SPEZIALI, P 1973 Luca Pacioli et son oeuvre, in *Sciences de la Renaissance, VIII Congrès international de Tours (De Pétrarque à Descartes XXVII)* Paris (Lib. Philosophique j. Vrin), 93-106 L PACIOLI.

SPEZIALI, P 1973 L'école algébристе italienne de XVI siècle et la résolution des équations des 3e et 4e degrés, in *Sciences de la Renaissance, VII Congrès international de Tours*, 93-106 CUBIC EQUATIONS. BOLOGNA. ITALY. QUARTIC EQUATIONS. XVI.
LYANTSE, V E & V M STASISHIN  F.Engels i matematika  
[F. ENGELS and mathematics] Visnik Lvivskogo Univ.  
ser. mekhano-matematichna 8, 3-8, 145 (Ukrainian with  
Russian summary) Origin and development of  
MATHEMATICAL ABSTRACTIONS. [Second author inadvertently  
omitted in previous publication in vol. 1, 495]  
(B.M. Schein)

* WIENER, Philip P 1968-1973 Dictionary of the History  
of Ideas. Studies of Selected Pivotal Ideas New York  
(Charles Scribner's) 5 volumes 3066 p $160  
HISTORICAL REFERENCE WORKS. The 311 articles include:  
NEWTON and the method of ANALYSIS, OPTICS and vision,  
RELATIVITY, SPACE, TIME and MEASUREMENT, man-machine  
from the Greeks to the COMPUTER, ABSTRACTION in the  
formation of concepts, ANTINOMY of pure reason,  
AXIOMATIZATION, CHANCE, CONTINUITY and discontinuity  
in nature and knowledge, GAME THEORY, INFINITY,  
LINGUISTICS, RELATIVITY of standards of mathematical  
RIGOR, MATHEMATICS IN CULTURAL HISTORY, NUMBER,  
PROBABILITY-objective theory, formal theories of social  
welfare, STRUCTURALISM, SYMMETRY and asymmetry. Also  
several articles on HISTORIOGRAPHY. Authors include  
K.J. Arrow, S. Bochner (also on editorial board), Henry  
Guerlac, Banesh Hoffmann, Maurice Kendall, Oskar Morgen-  
stern, C.J. Scriba, G.J. Whitrow, R.L. Wilder. The  
fifth volume gives a very fine grained index of 479  
pages -- about one four-column page of index to each  
five pages of text! Main index headings mention 112  
persons and 55 other subjects of evident relevance to  
the history of mathematics, each with many subtopics.

BUSARD, H L L & P S VAN KONINGSVELD 1973 Der Liber  
de arcubus similibus des Ahmed ibn Jusuf Ann. Sci. 30,  
381-406 A new look at this manuscript (and others).  
Conclusions: the author was not JARDANUS NEMORARIUS;  
the translator was GERARD OF CREMONA. Latin and Arabic  
texts are included. (C.R. Fletcher)

JECH, Thomas 1973 The Axiom of Choice Amsterdam  
(North Holland) 202 p INDEPENDENCE PROOFS. PRIME  
IDEAL THEOREM. TREATISES WITH HISTORICAL NOTES. This  
advanced text (with exercises, historical notes, and  
9-page bibliography) treats many of the notions  
connected with the AXIOM OF CHOICE and emphasizes  
Boolean-valued MODELS OF SET THEORY. (G.H. Moore)
IBRAGIMOV, I A et al 1973 Yurii Vladimirovich Linnik
Russian Math Surveys 28(2), 197-215 Y V LINNIK
Theory of Numbers. (D E Kullman)

STAMATIS, E S 1973 The heliocentric system of the
Greeks Contributions from the Res. Cent. for Ast.
Greek Astronomy.

EULER, Leonhard 1973 Commentationes Opticae. Volumen
quintum. Edited by Walter Habicht and Emil Alfred
Fellmann (Volume 9 of Series 3 of the Opera Omnia).
Basel (Orell Füssli Turici) 391 p. Works with
Enestroem numbers 844, 844a, 845-848 on Optics,
Optics, Eye Glasses, Telescopes, Microscopes, all
in French, with 63-page introduction and 23-page
historical commentary by the respective editors
(also reprinted separately), and Bibliography and
list of Euler's works on optics.

CARROLL, Lewis [C L Dodgson] 1973 Euclid and His
Modern Rivals. Reprint of the 2nd edition of 1885
(1st edition 1879), with an introduction by H.S.M.
Coxeter. New York (Dover) 306 p. W CHAUVENET.
W D COOLEY. FRANCIS CUTHBERTSON. OLAUS HENRICI.
ELIAS LOOMIS. J R MORELL. BENJAMIN PEIRCE. E M
REYNOLDS. J M WILSON. R P WRIGHT. ASSOCIATION FOR
IMPROVEMENT OF GEOMETRICAL TEACHING (GEOMETRICAL
ASSOCIATION). Geometry Education. Parallels.
Textbooks. Not a defence of Euclidean as opposed
to non-Euclidean geometry, but of Euclid from the
blunders in Logic and Pedagogy arising from ill-
considered "improvements" of late nineteenth
century writers.

GINDIKIN, S G 1973 Blez Paskal. K 350-letiyu so
dnya roshdeniya [BLAISE PASCAL. On his 350th
birthday Anniversãry] Kvant (8), 5-18. A popular
scientific biography. [RZ 1974 #2A16] (Helen
Skala)
FORBES, Eric G 1972 *The Unpublished Writings of Tobias Mayer.* Volume I: *Astronomy and Geography* (Arbeiten aus der Niedersachsischen Staats- und Universitätsbibliothek Göttingen, Band 9) Göttingen (Vandenhoeck & Ruprecht) 235 p DM. 18 ASTRONOMY. GEOGRAPHY. TOBIAS MAYER. TABLES. XVIII. This is the first of three volumes. The second will contain Mayer's lecture courses on artillery and mechanics. The third will publish his last treatise on the magnet and a sequel concerning terrestrial magnetism.

FEINBERG, Andrew 1972 *Polyhedra, pentagrams, and Plato* Fibonacci Quart. 10, 435-437 GREEK PHILOSOPHY. PHILOSOPHY OF MATHEMATICS. PLATO. A discussion of the Platonic belief that mathematics and logic are necessary, but not sufficient, steps in the pursuit of the highest good. (Abstracted by D E Kullman)

GOLDSTINE, Herman H 1972 *The Computer from Pascal to von Neumann* Princeton, N.J. (Princeton University Press) 388 p $12.50 COMPUTERS. J P ECKERT. ENIAC. J W MAUCHLY. J VON NEUMANN. Three parts: The historical background to World War II (120 pages), wartime developments: ENIAC and EDVAC (125 pages), and post-World War II: the von Neumann machine and the Institute for Advanced Study (110 pages). An appendix contains short accounts of computer developments in individual countries. Fourteen illustrations show machines and people. Numerous well-indexed references to individuals. The author was part of the team (with Eckert and Mauchly) that produced ENIAC.

GENDRIKHSON, N N 1972 O nekotorykh rabotakh Gaussa po teorii algebraicheskikh chisel (On some work of Gauss on the theory of algebraic numbers) Problemy istorii matematiki i mekhaniki 1, 56-60 ALGEBRAIC NUMBERS. CYCLOTONIC FIELDS. C F GAUSS. KUMMER. A discussion of the extent to which Gauss' unpublished work anticipated later developments, including the concept of ideal factors.
KODAMA, Akihoto 1972 *Abacus Books Published in the Ming Age* [in Japanese and Chinese] Fuji Junior College Press 242 p ABACUS. CHINESE MATHEMATICS. Part I (127 p in Japanese) describes SWANBAN books from the MING AGE. Part II (127 p in Chinese) gives in facsimile (4 original pages on each page) 7 original Chinese sources that are preserved only in single copies in Japan. *(Based on information supplied by Shin-ichi Oya)*

EGANYAN, A M 1972 *Grecheskaya logistika* [Greek LOGISTIC] Erevanskii Armyanskii Gosudarstvennyi pedagogicheskii institut imeni Kh. Abovyan (Izd. "Aiastan") 310 p A critical review of the secondary literature on GREEK arithmetical science and technology from Nesselmann (1842) through Kurt Vogel's classic study (1936) to recent work, with analysis of ancient and medieval sources, some novel conclusions about the components of Plato's fourfold classification (in his *Philebus*) of numerical science into (1) theoretical arithmetic (NUMBER THEORY), (2) applied arithmetic (number theoretic calculations), (3) theoretical logistic (ALGEBRA), (4) applied logistic (ALGORITHMS COMPUTING). The thrust is toward still further upgrading our evaluation of ANCIENT algebra and computing to correct the imbalance resulting from previous concentration on the better documented Greek achievements in geometry. BIBLIOGRAPHY (301 titles).

AKHMEDOV, A 1972 *O geometricheskom traktate Shamsiddina Samarkandi* [On a geometrical treatise of SHAMSIDDO OF SAMARKAND] *Nauch. tr. Tashkent*. un-t. 418, 35-51 In studying the geometrical treatise *Fundamental Propositions (Obosnovannye Predlozheniya)* of Shamsiddin (13-14 centuries) the author shows that the so-called Roman Edition of EUCLID'S DATA could not be by Tusi, but rather, by a member of the Samarkand school. *(H.L. Skala)*

CHENAKAL, V L 1972 Teodor Girgenson. Peterburgskii master nauchnykh instrumentov pervoi poloviny XIX veka [THEODORE GIRGENSON. The ST. PETERSBURG master instrument maker] *Iz istorii estestvoznaniya i teckhnik i Pribaltiki* 4, 37-80 INSTRUMENTS.
FISCH, Max H 1972 Peirce and Leibniz Journal of the History of Ideas 33, 485-496 C S PEIRCE.
LEIBNIZ. PRAGMATISM. Documentation from the Peirce mss. and discussion of the following assertions:
(1) by Paul Weiss (in Dictionary of American Biography) that "Peirce placed himself somewhere near the rank of Leibniz" with respect to logic -- a view shared by some of Peirce's contemporaries;
(2) by Fisch that "Peirce identified himself more closely with Leibniz than with any other thinker," essentially because of their shared interests and intellectual developments.

YANOVSKAYA, S A (1895-1966) 1972 Metodologicheskie problemy nauki Moscow (Izd Mysl) 278 p
S A YANOVSKAYA. PHILOSOPHY OF MATHEMATICS.
ABSTRACTION. KARL MARX. MICHEL ROLLE. N I LOBACHEVSKI. AXIOMATICS. MATHEMATICAL LOGIC.
ZENO PARADOXES. RIGOR. RENE DESCARTES.
BIBLIOGRAPHY. PORTRAIT. A collection of 11 papers by Yanovskaya (1895-1966), preceded by a biographical note by D P Gorskii, and followed by a bibliography of 69 items.

PETROVA, S S 1972 O summirovanii raskhodyashchikhsya ryadov u Nyutona (The work of Newton on the summation of divergent series) Problemy istorii matematiki i mehaniki 1, 10-14 I NEWTON.
DIVERGENT SERIES. L EULER. Based on the Whiteside edition of Newton's mathematical papers and Hardy's book on divergent theories.

A REFERENCE BOOK giving information on careers, education, library use, organization, textbooks, serials, bibliographies, and sources of statistical data.

SHKOLENOK, G A 1972 O konstruktivnom obrozovanii ploshkikh algebraicheskikh krivykh v abatotakh angliskikh matematikov 17-18 v. (On the constructive generation of plane algebraic curves in the work of English mathematicians of the 17th and 18th centuries) Problemy istorii matematiki i mekhaniki 1, 15-24

ENGLAND. C MACLAURIN. I NEWTON. PLANE ALGEBRAIC CURVES. XVII. XVIII.

KUZNETSOV, B G 1972 Einstein. Zhizn, Smert, Bessmertie (Einstein. Life, Death, Immortality) Moscow (Izd. Nauka) 607 p 2 r. 21 k. BIBLIOGRAPHIES. EINSTEIN. RELATIVITY. PORTRAITS. A detailed but nontechnical personal and scientific biography organized in four parts: Life (with discussion of his major work, including its origin and development), Death (including: Last years; Nonclassical science, the problem of death, and fear of death; The death of Gulliver), Immortality (Immortality of the mind; Infinity and immortality; Immortality of man; The principle of existence; Unified field theory), Parallels (chapters comparing Einstein with Aristotle, Descartes, Faraday, Mach, Bohr, Dostoevski, and Mozart). The 19-page bibliographic survey is an extensively annotated list in four parts: works by Einstein, biographies, collections relating to his life and scientific work, and books on the theory of relativity. There are many portraits of Einstein and others, including his parents and colleagues, facsimiles, and pictures of his residences.

HAWKINS, Thomas 1972 Hypercomplex numbers, Lie groups, and the creation of group representation theory Archive for the History of Exact Sciences 8, 243-287 W BURNSIDE. E CARTAN. GROUP ALGEBRAS. GROUP REPRESENTATIONS. HYPERCOMPLEX NUMBERS. LIE GROUPS. H MASCHKE. MATRICES. T MOLIEN. REDUCEABILITY. A continuation of research reported in the author's "The origins of the theory of group characters," in Archive for the History of Exact Sciences 7 (1971), 142-170. The author identifies at least four lines of investigation leading to group representation theory, and he concludes that Dedekind played a crucial role in stimulating Frobenius to found the subject. Bibliography of 140 items.
GILLINGS, Richard J 1972 Mathematics in the Time of the Pharaohs Cambridge, Mass. (MIT Press) 297 p US $25 EGYPTIAN MATHEMATICS. NUMERATION SYSTEMS. PYRAMID VOLUME. RHIND PAPYRUS. SPHERE AREA. UNIT FRACTIONS. A reexamination of primary and secondary sources, providing a general account of Egyptian mathematics with the conclusion that its accomplishments were greater than generally believed. Fourteen appendices of commentary and additional information, including contents of the Rhind mathematical papyrus and Moscow mathematical papyrus, a chronology, and map of Egypt. Bibliography (ten pages).

FOLKERTS, Menso 1972 Pseudo-Beda: De arithmeticis propositionibus. Eine mathematische Schrift aus der Karolingierzeit (The Pseudo-Beda De arithmeticis propositionibus. A mathematical writing from Carolingian times) Sudhoffs Archiv. Zeitschrift für Wissenschaftsgeschichte 56, 22-43 BEDA VENERABILIS. MEDIEVAL MATHEMATICS. VIII. IX. X. Based on an analysis of all known manuscripts (here described, classified, and followed by a critical edition of the Latin text), this paper concludes that the publication attributed to Beda was written somewhat later, between the eighth and the tenth century. Included is the first addition involving negative integers prior to the fifteenth century!

AMERICAN MATHEMATICAL SOCIETY 1972- Index of Mathematical Papers Providence, Rhode Island BIBLIOGRAPHIC INDEXES. Beginning with the period July to December 1970, Volume I of this index covers papers handled by the AMS Mathematical Title Service, listing papers under appropriate classifications from the classification scheme adopted originally by the Mathematical Offprint Service. Its weaknesses are the limited number of journals covered (no history of science journals) and the rigid classification scheme used.

FANG, J 1972 A Guide to the Literature of Mathematics Today Hauppauge, New York (Paideia Press) 267 p $9.80 BIBLIOGRAPHIES. CLASSIFICATION IN MATHEMATICS. INFORMATION RETRIEVAL. REFERENCE WORKS. TAXONOMY OF MATHEMATICS. TERMINOLOGY. This work is tight-packed with bibliographic and other information about mathematics, obtained by the author from various sources, but above all from Iwanami Sugaku-Ziten (Dictionary of Mathematics), edited by S Iyanaga and authored by members of the Mathematical Society of Japan, Tokyo, 1954, 1960, 1968, and soon to be published in English translation by the MIT Press. It begins with a brief introduction suggesting that mathematics be defined ostensively in terms of a complete list of its subjects. There are lists of major reference works, international congresses, mathematical societies, fashionable topical subdivisions as of 1900 and as of 1970, current terminology (50 pages based on the index of the Iwanami Sugaku-Ziten), selected references under these subject-headings (apparently from the references given at the end of the articles in the Iwanami Sugaku-Ziten), names, addresses, and abbreviations of major mathematical publishers, major publishers' series and the books that have been published in each, major collected works of mathematicians, and major mathematical journals.

BAJAJ, Prem N 1972 Numerals. A gift of Hindu scholars Vishveshvaranand Indological Journal 10, 140-141 (Vishveshvaranand Indological Paper Series 323) NUMERATION. A reminder that the so-called "Arabic numerals" come from medieval India.
LOSEE, John 1972 *A Historical Introduction to the Philosophy of Science* (Oxford University Press) 218 p $3.75 Can. BIBLIOGRAPHIES. CONVENTIONALISM IN MATHEMATICS. PHILOSOPHY OF MATHEMATICS. PHILOSOPHY OF SCIENCE. POSITIVISM IN MATHEMATICS. A general work describing philosophy of science from Aristotle to about 1940. Includes numerous references to mathematics and topics of interest to the history of mathematics, recoverable by consulting the name index and the subject index under various subtopics such as "axiomatic method" and "geometry." The 19-page bibliography is arranged by major authors and topics. There is a chapter on mathematical positivism and conventionalism (Berkeley, Mach, Duhem, Poincaré, Hanson). At the beginning of each chapter is a brief table of contents and thumbnail biographies of the main persons considered.

LAWRENCE, J Dennis 1972 *A Catalog of Special Plane Curves* New York (Dover Publications) 229 p $3.00 DICTIONARIES. PLANE CURVES. No historical notes, but pictures of 89 curves, 15 tables of information about special curves, a 95-item chronological bibliography, and an index of curve names.

GRIDGEMAN, N T 1972 *Fibonacci* *Science Affairs* 6, 41-ff. FIBONACCI (LEONARDO DA PISA) Popular and humorous account of Fibonacci, his sequence, and related matters.

GLAESER, Georges 1972 *La transmission des connaissances mathématiques hier, aujourd'hui, demain* (The transmission of mathematical knowledge yesterday, today, and tomorrow) *Enseignement Math.* 18, 277-287 AXIOMATICS. BOURBAKI. COMMUNICATION. CURRENT HISTORY. HISTORY OF MATHEMATICS EDUCATION. TERMINOLOGY. XX. The author describes three types of mathematics teaching: impressionistic, expository, and dynamic. Each type is illustrated by the work of prominent mathematicians of the 19th and 20th centuries.
DICTIONARIES. STATISTICS TERMINOLOGY. About 2500 terms compared with 1700 in the first edition (1957).

GILLISPIE, Charles Coulston 1971 *Lazare Carnot*
* Savant.* A monograph treating Carnot's scientific work, with facsimile reproduction of his unpublished writings on mechanics and on the calculus, and an essay concerning the latter by A P Youschkevitch. Princeton, N.J. (Princeton University Press) 380 p $17.50 LAZARE CARNOT. CALCULUS. SADI CARNOT. MECHANICS. A beautiful volume well-described by its title. The monograph begins with a biographical sketch. It then analyzes the work of Carnot on the science of machines, mechanics, work and power, and the engineering justification of algebra and calculus. The essay by A P Youschkevitch concerns the competition of the Berlin Academy in 1786 on the mathematical theory of the infinite. Appendix A contains a photographic reproduction of Carnot's "Dissertation sur la théorie de l'infini mathématique" (91 pages), followed by five pages of notes. Appendix B reproduces photographically parts of memoirs on the theory of machines. The book closes with some footnotes transcribed from Carnot's memoirs and a bibliographic note on Lazare Carnot, his son Sadi Carnot, and the historical context. The work emphasizes the significance of engineering components in the development of modern physics and mathematics and displays the origins of Sadi Carnot's work in his father's analysis of machine processes.

EVES, Howard W 1971 *Mathematical Circles Revisited.*
* A Second Collection of Mathematical Stories and Anecdotes* Boston (Prindle, Weber and Schmidt) 208 p US $10 ANECDOTE COLLECTIONS. A collection of 360 additional items (following *In Mathematical Circles*, 1969) arranged by general topics and indexed. It includes a number of stories of living or recently-living mathematicians.
AL-FARABI 1972 Matematicheskie Traktaty (Mathematical Tracts) Edited by Sh. E. Esenov, A. Kubesov, and others. Alma-Ata (Izd. Nauka) 323 p 1 r., 35 k. AL-FARABI. ARAB MATHEMATICS. MEDIEVAL MATHEMATICS. The book contains Russian translations of the section on mathematics in al-Farabi's "Enumeration of the Sciences," the trigonometric chapters from his commentaries on Ptolemy's Almagest, his work on geometric figures, his commentaries on Euclid, and his tract on astrology, indeed all the known mathematical writing, together with commentary by the editors, including an eight-page article on his mathematical contributions.

GRATTAN-GUINNESS, I, in collaboration with J R Ravetz 1972 Joseph Fourier, 1768-1830. A survey of his life and work, based on a critical edition of his monograph on the propagation of heat, presented to the Institut de France in 1807 Cambridge, Mass. (MIT Press) 528 p US $20 CRITICAL EDITIONS. JOSEPH FOURIER. FOURIER SERIES. HEAT TRANSMISSION. MANUSCRIPTS. PARTIAL DIFFERENTIAL EQUATIONS. A critical edition of a previously unpublished monograph submitted by Fourier to the Institut de France (December 1807) on the propagation of heat in continuous bodies; preceded by a 26-page biographical essay (including a synopsis of the surviving collections of Fourier's lecture notes); accompanied by extensive commentary in chapter introductions and footnotes; and followed by further biographical discussion of Fourier's final years in Paris, a bibliography of Fourier's publications, sources of scientific manuscripts, and principal writings on Fourier's life and work; and four photographic plates, including a little-known engraving of him from 1800 and two bas-relief representations of him located in the town hall of Auxerre.

BRUN, Viggo 1972 Noen nye biografiske opplysninger om Caspar Wessel (New biographical information on Caspar Wessel) Nordisk matematisk tidskrift 20, 37-38 CASPAR WESSEL. GEODESY. A short personal description of Wessel, and information on his geodetical work in Oldenburg.
FOLTA, Jaroslav & NOVY, Lubos 1972 Ještě k otázce tvůrčího věku matematiků (On the productive age span of mathematicians) Dejiny ved a techniky 72(5), 100-106 HISTORICAL THEORY. QUANTITATIVE METHODS IN HISTORY. SOCIOLOGY OF MATHEMATICS. A statistical study based on the Soviet publication Mathematics in the Soviet Union 1958-1967 and on previous statistical studies of the authors. They observe statistical growth in the number of first publications in mathematics and a rise in the age at first publication during the war years.

GRATTAN-GUINNESS, Ivor 1972 A mathematical union: William Henry and Grace Chisholm Young Annals of Science 29, 105-186 PORTRAITS. UNIVERSITY EDUCATION. WOMEN MATHEMATICIANS. G C YOUNG. W H YOUNG. A biography of the couple, based on documents and letters, with considerable information about their children and the university education in England and Germany at the turn of the century.


EILART, J, Editor 1971 Items from History of Science in the Estonian SSR Tartu (Academy of Sciences of the Estonian S S R, Estonian Department of the Soviet National Science and Technology and the Institute of Physics and Astronomy) 131 p ESTONIA. CARTOGRAPHY. GENETICS. HISTORIOGRAPHY OF MATHEMATICS IN ESTONIA. ADOLPH KNESER. MIHKEL PILL. F G W STRUVE. TARTU (DORPAT) UNIVERSITY. COLLECTIONS. A collection of eight papers, four of which (by E Varep, P Mühirsepp, U Lumiste, and J Eilert) deal with topics listed above.
GENERAL. ANCIENT. MIDDLE AGES. MODERN MATHEMATICS. XVII. XVIII. Vol 1 deals with ancient and medieval mathematics, up to and including the Renaissance. Vol 2 deals with the seventeenth century. Vol 3 deals with the eighteenth century. Each volume has its name index (with Latin alphabet equivalents of transliterated names, a feature that will make these indices useful to scholars puzzled by some Russian forms) and substantial bibliographies. Authors of individual chapters in the three volumes are V I Antropova, A G Bashmakova, E I Berezkina, M V Chirikov, A V Dorofeeva, L E Maistrov, E P Ozhigova, B A Rozenfeld, N I Simonov, O B Sheinin, A P Yushkevich. [Editor's Note: Although this book will be reviewed as a whole, its size makes a single detailed review impractical. We therefore solicit commentary in our correspondence department.]

THIRUVENKATACHARYA, V (Acharya, V T) 1970 The Antiquity of Hindu Astronomy and the Tamils. The New College, Madras (published by the author, 13 Musa Sait St, T Nagar, Madras-17, India) 47 p Re 1 INDIAN ASTRONOMY. CHRONOLOGY. The author argues that the accomplishments of Hindu astronomy should be dated earlier than is now accepted. For example, he places Aryabhata 3000 years before the fifth century A D, where he is generally placed by scholars today. Mirovaya Matematika za 10 let (1953-1963). Autorsko-bibliograficheskii ukazetel k desyatiletнемii komplektu RZh "Matematika" v trech tomakh. I: Russkii Alfabet II: Latinskii Alfabet A-K III: Latinskii Alfabet L-Z (World Mathematics. 10-Years Cumulative Author Bibliographical Index of the Referativny Zhurnal "Mathematics" (1953-1963) in three volumes. I: Russian Alphabet II: Latin Alphabet A-K III: Latin Alphabet L-Z) 1970 Moscow (Vsesoyuznyu ins institut nauchnoi i tehknicheskoj informatii [VINTI]) BIBLIOGRAPHIES. These author indexes are essential for any mathematics library, but subject indexes would be even more useful.
TURAN, Pal, Editor & Commentator 1970 Leopold Fejer Gesammelte Arbeiten (Two volumes) Edited for the Hungarian Academy of Science (Birkhauser Verlag) 872 p, 850 p Swiss Fr. 196; DM. 176 LEOPOLD FEJER. COLLECTED WORKS. FOURIER SERIES. FUNCTION THEORY. The volumes begin with 16 pages of introductory and biographical material in Hungarian with German translation. Fejer's papers are arranged chronologically (congratulations to the editors for avoiding the regrettable practice of rearranging a mathematician's work according to present-day fashions of classification!), with papers in Hungarian immediately followed by German translations.

PINGREE, David 1970 Census of the Exact Sciences in Sanskrit, Series A, Volumes I & 2 (Memoirs of the American Philosophical Society 81) Philadelphia (American Philosophical Society) Vol 1: 67 p US $5 Vol 2: 154 p US $6 SANSKRIT SOURCES. MANUSCRIPTS. BIBLIOGRAPHY. INDIAN MATHEMATICS. This and succeeding volumes are intended to cover material collecting since 1955 in various American, European, and Indian libraries. Series A contains articles on Sanskrit authors arranged in the order of the Sanskrit alphabet. Series B will contain articles on books (mostly in Sanskrit but including some non-Sanskrit materials). A separate volume will contain tables of astronomical parameters, genealogical information, and indexes. The first volume contains a list of abbreviations of journals, a bibliography of Western publications, a list of catalogues of Sanskrit materials, and 25 pages of author entries. The second volume contains some material supplementary to the first volume (p 3-18) and a continuation of the author census.

BECK, Anatole + BLEICHER, Michael N + CROWE, Donald W 1969 Excursions into Mathematics New York (Worth) 510 p $10.75 HISTORY IN MATHEMATICS EDUCATION. TEXTS USING HISTORICAL MATERIAL. In order to reach its goal of acquainting "the general reader with some flavour of mathematics," this book, suitable for high school graduates, introduces a number of topics, partly motivated, explained, and placed in perspective by historical introductions and notes.
ROSE, Michael 1969 *Computers, Managers and Society*
Harmondsworth, Middlesex, Eng (Penguin Books) 267 p
L 0.35 COMPUTERS. CURRENT HISTORY. SOCIOLOGY OF
MATHEMATICS. A survey of the recent history and
current status of computers and their social inter-
relations. Reviewed unfavorably in *Computing*
Reviews (Jan 1971).

STYAZHKIN, N I 1969 *History of Mathematical Logic*
from Leibniz to Peano Cambridge, Massachusetts
(MIT Press) 341 p US $12.50 BIBLIOGRAPHY. GEORGE
BOOLE. E L BUNITSKII. G F CASTILLON. G FREGE.
W S JEVONS. G LEIBNIZ. S MAIMON. G PEANO. C S
PEIRCE. P S PORETSKII. E SCHROEDER. MATHEMATICAL
LOGIC. MIDDLE AGES. XVII. XVIII. XIX. A
translation of the original published by Nauka in
Moscow in 1964 as Stanovleniye idey matematicheskoy
logiki. In his preface the author says that he
intends to combine the philological and retrospec-
tive-logical methods to avoid both the excesses of
reducing the study to a history of terminological
innovation and the modernizing of old material. The
bibliography contains 535 references arranged by
personalities after an initial 82 references on logic
in the Middle Ages.

Bernoulli* (Herausgegeben von der Naturforschenden
Gesellschaft in Basel, Band I) Basel (Birkhäuser)
553 p SF 76 ASTRONOMY. JAKOB BERNOULLI.
GEOPHYSICS. LOGIC. SCIENTIFIC METHODOLOGY. PHYSICS.
This handsome, well-produced volume is the first of
five. It includes the youthful publications of the
founder of the Basel mathematical dynasty. The
volume contains a preface by the editor, numerous
papers arranged under six topics (Sundials, spheri-
cal astronomy. Heliocentric orbit determination.
Geophysics. Logic and methodology. Theoretical
physics. Experimental physics.), three appendixes
giving an index of writings, a list of multiply-
cited works, and an index of persons with
biographical information. There are facsimiles and
a fine portrait. The contents of further volumes
are as follows: II. Youthful writings on elementary
mathematics. III. Probability. IV. Calculus.
V. Correspondence. (Reviewed by C. Truesdell 1973
*Isis* 64, 112-114.)
SMITH, David Eugene 1969 *Number Stories of Long Ago* (Classics in Mathematics Education Series, Vol 2) Washington, DC (National Council of Teachers of Mathematics) 161 p US $4 cloth, $2 paper HISTORY OF MATHEMATICS IN ELEMENTARY EDUCATION. NUMBER SYSTEMS. Reprint in facsimile (including the quaint colored borders and vintage colored illustrations) of these rather fanciful stories first published in 1919 by the NCTM. Children of all civilizations and countries, including the Far East, included from the beginning. Some information about methods of numeration and calculation from ancient times to "a modern adding machine" illustrated on p 59.

EVES, Howard W 1969 *In Mathematical Circles.* A Selection of Mathematical Stories and Anecdotes 2 Volumes: Quadrants I and II, 153 p; Quadrants III and IV, 156 p Boston (Prindle, Weber & Schmidt) $ 15 ANECDOTE COLLECTIONS. Drawn from the author's collection of materials that have "proved very useful in the classroom -- as little interest-rousing atoms to add spice and a touch of entertainment, to introduce a human element, to inspire the student, to instill respect and admiration for the great creators, to yank back flagging interest, to forge some links of cultural history, or to underline some concept or idea," this collection is dedicated to teachers, but it will be enjoyed by all those interested in mathematics. The second volume contains a topical index.

STRUIK, D J, Editor 1969 *A Source Book in Mathematics, 1200-1800* (Source Books in the History of the Sciences) Cambridge, Massachusetts (Harvard University Press) 441 p US $11.95 MEDIEVAL MATHEMATICS. MODERN MATHEMATICS. RENAISSANCE MATHEMATICS. The 75 selections from Latin authors writing during the period 1200-1800 are translated into English accompanied by introductory and interspersed comments, numerous figures, and facsimiles.
HOWARD, A E & FARMER, W & BLACKMAN, R A 1968 Teaching Mathematics New York (Humanities Press) 192 p MATHEMATICAL EDUCATION. This exposition of the authors' approach to teaching of mathematics and the organization of mathematical education includes some references to the recent history of mathematical education and a chapter of 17 pages on "Modern mathematics in history" which sketches the history of mathematics as a process leading to "modern mathematics."

SJÖSTEDT, C E, Editor 1968 Le Axiome de Paralleles de Euclides a Hilbert. Un Probleme Cardinal in le Evolution del Geometrie. Exerptes in facsimile ex le principal ovres original e traduction in le lingue international auxiliari Interlingue. Uppsala (Interlingue-Foundation) 982 p US $20 PARALLELISM. NON-EUCLIDEAN GEOMETRY. INTERLINGUE. Excerpts in facsimile from the main original works on the parallel axiom from Euclid to the end of the 19th century, with translations into the international auxiliary language Interlingue, plus a historical sketch and extensive commentary on the excerpts, numerous notes, and an index of persons. Two appendices on Interlingue. Several portraits of mathematicians. A very handsome book.


GUNThER, A E 1967 Robert T Gunther, a Pioneer in the History of Science. 1869-1940 (Early Science in Oxford, Vol XV) Oxford (Oxford University Press) 533 p ROBERT T GUNThER. ASHMOLEAN MUSEUM. MAThEmATICAL INSTRUMENTS. Before his death in 1940, R T Gunther planned to complete his Early Science in Oxford with a 15th volume on the history of the old Ashmolean building. Instead, the 15th volume is his biography by a son. The appendix contains material concerning the history of the Ashmolean Museum of which R T Gunther was the first curator from 1924 to 1940. Included are some references to instruments of interest to mathematicians.

SEN, S N with the research assistance of A K Bag and S Rajeswar Sarma 1966 A Bibliography of Sanskrit Works on Astronomy and Mathematics. Part I: Manuscripts, Translations and Studies (National Commission for the Compilation of the History of Sciences in India, Source Material Series) New Delhi (National Institute of Sciences of India) 281 p US $5 BIBLIOGRAPHIC REFERENCE WORKS. HINDU MAThEmATICS. SANSKRIT WORKS ON MAThEmATICS. An alphabetical author and title list, with cross references from titles to authors.


ALLEN, Don Cameron 1966 The Star-Crossed Renaissance. The Quarrel about Astrology and its Influence in England London (Frank Cass) 291 p L3.15 ASTROLOGY. BIBLIOGRAPHY. ENGLAND. ITALY. XV. XVI. A reprint of the original (1941) study of the decline of this pseudo-science, which has often been closely related to mathematics and has even shared its name at times.