

ABSTRACTS

The purpose of this department is to give sufficient information about the subject matter of each publication to enable users to decide whether to read it. It is our intention to cover all books, articles, and other materials in the field.

Books for abstracting and eventual review should be sent to this department, with an extra copy sent directly to the editor of the Book Reviews Department if the publisher wishes to accelerate the process. Materials should be sent to Dr. Albert C Lewis, Humanities Research Centre, Box 7219, Austin, TX 78712.

Readers are invited to send reprints, autoabstracts, corrections, additions, and notices of publications that have been overlooked. Be sure to include complete bibliographic information, as well as transliteration and translation for non-European languages. We need volunteers willing to cover one or more journals for this department.

The indexing terms (in 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.

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. Isis 102, 45 means item 45 in the 102nd Isis Critical Bibliography.

In order to facilitate reference and indexing, entries are given serial numbers which appear at the end following the symbol #. The serial numbers of books are underlined.

A name in parentheses at the end of an entry indicates the abstractor. In this issue there are abstracts by S. Kotz, D.E. Kullman, A.C. Lewis, L.F. Meyers, E.R. Phillips, and H.S. Tropp.

CLAGETT MARSHALL editor 1978 ARCHIMEDES in the middle ages. Volume 3: The fate of the medieval Archimedes 1300 to 1565. Vol. 125, Memoirs of the American Philosophical Society. Philadelphia, (The American Philosophical Society). 4 parts in 3 vols. (1582 pp). Part I: The Moerbeke translations at Paris in the fourteenth century. Part II: The Arabo-Latin and handbook traditions of Archimedes in the fourteenth and early fifteenth centuries. Part III: The medieval Archimedes in the Renaissance, 1450-1565. Part IV: Appendixes, bibliography, diagrams, and indexes. Earlier volumes abstracted in #302. This volume concludes the author's "direct investigation" of Archimedean traditions in the Middle Ages. (ACL). #951.

HØYRUP ELSE 1978 WOMEN AND MATHEMATICS, sciences and engineering, a partially annotated bibliography with emphasis on mathematics and with references on related topics. Skriftserie fra Roskilde Universitetsbibliotek 4. Denmark (Roskilde University Library). 62 pp. Approximately 350 authors are represented, subject arranged with an author index. The address of the author, who is continuing this work, is: Bøgevej 8, DK 3500 Vaerløse, Denmark. (ACL). #952.

ABBOTT J C 1978 The CHAUVENET PAPERS: A collection of prize-winning expository papers in mathematics. The Mathematical Association of America. 2 vols. A history of the CHAUVENET PRIZE is given. Each of the 24 papers is preceded by a short account of the author. (ACL). #953.

POVŠIČ JOŽE 1978 Bibliografija Franca Hočvarja; FRANC HOČVAR--BIBLIOGRAPHY. Ljubljana, Yugoslavia (Slovenska Akademija Znanosti in Umetnosti). 35 pp. A 3-page introduction to the life and work of Hočvar, 1853-1919, is given, also in English. The bibliography includes his 20 major works and nearly 200 different editions of his textbooks in mathematics. Portrait. (ACL). #954.

ISTORIKO-MATEMATICHESKIE ISSLEDOVANIYA 1977 Vol. 22. Moscow (Nauka). 304 pp. The volume includes 23 articles, memoirs and translations, and a name index. Individual articles are abstracted below. (ERP). #955.

KORENTSOVA M M 1977 Kinematiko-geometricheskaya model analiza v "Traktate o Fluksiyakh" K. Maklorina. (A kinematic-geometric model in Maclaurin's "Treatise on Fluxions"). In #955, 9-33. C. MACLAURIN's geometric-synthetic method as presented in "A Treatise on FLUXIONS," and its role in the development of INFINITESIMAL ANALYSIS. The method is related to other theories of infinitesimals in particular to the DIFFERENTIAL CALCULUS of W. LEIBNIZ. (ERP). #956.

ZHURVASKII A M 1977 K istorii ryada Lagranzha (On the history of LAGRANGE's series). In #955, 34-45. In 1769 Lagrange introduced series in attempting to solve equations. Subsequent related investigations made by J. LAMBERT, A. CAUCHY, P. CHEBYSHEV, and his students, E. ZOLOTAREV, Y. SOKHOTSKII and P. NEKRASOV, are described. (ERP). #957.

GERONIMUS Y A 1977 K istorii kvadraturnoi formuly P.L. Chebysheva (On the history of Chebyshev's quadrature formulas). In #955, 46-64. The QUADRATURE FORMULA of P. CHEBYSHEV (1874) and related investigations and applications (up to 1972). GAUSS-CHRISTOFFEL formulas, A.N. KRYLOV and shipbuilding, S.N. BERNSTEIN, N.I. AKHIEZER, ORTHOGONAL POLYNOMIALS. (ERP). #958.

GOLOVINSKII I A 1977 Iz istorii interpolyatsionnykh ryadov (From the history of INTERPOLATION SERIES). In #955, 65-81. A survey of interpolation methods up to the beginning of the 19th century. Series introduced by I. NEWTON, B. TAYLOR, P. LAPLACE and N. ABEL and their consideration by other mathematicians, such as J. LAGRANGE and L. EULER. (ERP). #959.

KURDYUMOVA A I 1977 Ekstraordinarnye integraly Koshi (The EXTRAORDINARY INTEGRAL of CAUCHY). In #955, 82-84. This integral was first introduced in an attempt to extend the definition of the GAMMA-FUNCTION to negative values of the argument. It is seen as a precursor of the 20th century concept of a GENERALIZED FUNCTION. (ERP). #960.

LYUSTERNIK L A & PETROVA S S 1977 Iz istorii simbolicheskovo ischisleniya (From the history of symbolic calculus). In #955, 85-101. The works of French mathematicians of the late 18th and early 19th centuries on operations induced by differentiation.

- LINEAR DIFFERENTIAL EQUATIONS, FINITE DIFFERENCES. J. LAGRANGE, P. LAPLACE, L. ARBOGAST, B. BRISSON, F. SERVOIS, A. CAUCHY, and D. GREGORY. (ERP). #961.
- REIZIN L E 1977 Iz istorii obshchei teorii obyknovennykh differentsialnykh uravnenii (On the history of the theory of ordinary differential equations). In #955, 102-110. Differentiability and continuity of solutions of DIFFERENTIAL EQUATIONS with respect to parameters and initial conditions. Extension of solutions. Non-integral contractions and expansions of manifolds. P. BOHL, F. SCHUR, G. PEANO, V. STEPANOV, H. POINCARÉ, O. PERRON, C. SIEGEL, G. BIRKHOFF, and others. (ERP). #962.
- VISGIN V P 1977 Vzaimosvyaz fiziki i matematiki v XIX veke (The relationship between physics and mathematics in the 19th century). In #955, 11-126. Broad survey including a chronological chart listing the major results in PHYSICS and their corresponding influence on mathematics. (ERP). #963.
- YUSHKEVICH A P 1977 O matematicheskikh rukopisyakh I. Nyutona (On the mathematical manuscripts of I. Newton). In #955, 127-192. An analysis of the published mathematical works (1664-1684) of I. NEWTON, based mainly on the recently published D. WHITESIDE edition. (ERP). #964.
- MELNIKOV I G 1977 Metod beskonechno spuska (The METHOD of INFINITE DESCENT). In #955, 193-199. Examples found in the works of EUCLID, J. CAMPANUS, P. FERMAT, L. EULER, and others. (ERP). #965.
- MAISTROV L E 1977 O veroyatnostnoi kontseptsii Paskalya u A. Reni (On Pascal's concept of probability, according to A. Rényi). In #955, 200-211. Objections are raised to A. RÉNYI's reconstruction of a non-existing letter from B. PASCAL to P. FERMAT on the subject of PROBABILITY. Pascal's conception of PROBABILITY. (ERP). #966.
- SHEINEN O B 1977 Teoriya veroyatnostei P.S. Laplasy (Laplace's theory of probability). In #955, 212-224. LAPLACE's contributions to the general theory of PROBABILITY, his philosophical DETERMINISM, probabilistic ideas in physics. (ERP). #967.
- YURKINA M I 1977 Vklad Eйлера i Gaussa v reshenie zadach o schete vysot (The contributions of EULER and GAUSS to the solution of the problem of calculating altitude) In #955, 225-228. Theory of POTENTIAL. GEODESY. (ERP). #968.
- SLAVUTIN E I 1977 O "Dannyykh" Evklida (EUCLID's "DATA"). In #955, 229-236. The first 23 problems in the DATA, stated by Euclid in the language of the THEORY OF PROPORTIONS, are translated into the language of linear functions. (ERP). #969.
- SIMONOV R A 1977 O formirovani drevnerusskoi numeratsii (On the development of NUMERATION in medieval Russia). In #955, 237-241. The replacement of Byzantine signs by Cyrillic letters to designate numbers. (ERP). #970.
- ALEKSANDROV P S 1977 Vospominaniya o Gettingene (Recollections of GÖTTINGEN). In #955, 242-244. An account by the noted topologist of his visits to GÖttingen throughout the 1920s and 1930s, and again after the war. D. HILBERT, E. NOETHER, H. HOPF, A. KUROSH. (ERP). #971.
- GELFOND A O 1977 Nekotorye vpechatleniya o nauchnoi poezdke v Germaniyu v 1930 g (Some impressions of a scientific trip to Germany in 1930). In #955, 246-251. Among those in GÖTTINGEN at that time were D. HILBERT, H. WEYL, R. COURANT, E. LANDAU, E. NOETHER, B. L. VAN DER WAERDEN, E. ARTIN, H. HAASE, K. FRIEDRICH, H. LEVI, O. NEUGEBAUER, and many others! (ERP). #972.
- SHTYKAN A B 1977 O nekotorykh voprosakh istorii matematicheskovo analiza i evolyutsii sredstv vychislenii (Some questions in the history of ANALYSIS and the evolution of the methods of CALCULATION). In #955, 252-273. Discoveries made by I. NEWTON, C. HUYGENS, W. LEIBNIZ, and the BERNOULLI brothers in the area of QUADRATURES and CUBATURES and their role in the development of the INFINITESIMAL CALCULUS. The author claims that these discoveries have not been taken into account in the generally accepted histories of this subject. BIBLIOGRAPHY. (ERP). #973.

- LEIBNIZ G W 1977 Supplementum geometriae dimensionariae, seu generalissima omnium tetragonismorum effectio per motum, similiterque multiplex constructio lineae ex data tangentium conditione (translated into Russian and annotated by A.B. SHTYKAN). In #955, 274-285. Written in 1693, this paper contains a description of a mechanical scheme related to the process of integration. It is discussed in #973. (ERP). #974.
- HUYGENS C 1977 Pismo k avtoru (A letter to the author). In #955, 286-288. Translated by A.B. Shtykin, with notes. MECHANICAL METHOD for tracing a TRACTRIX. This letter is discussed in #973. (ERP). #975.
- BERNOULLI JOH. 1977 Solutio problematis Cartesio propositi Dn. de Beaune (translated from the Latin by A.B. Shtykan and O.A. Petrova, with notes). In #955, 289-291. ISOCLINE curves. Discussed in #973. (ERP). #976.
- BERNOULLI JAC. 1977 Solutio problematis Fraternali ante octiduum Lipsiam transmissi (translated from the Latin by A.B. Shtykan, with notes). In #955, 292-294. A mechanism is described for a geometric construction of a curve if properties of the tangent are given. Discussed in #973. (ERP). #977.
- DIOPHANTUS 1975 Sina't al-Gabr l'Diophantus (The art of algebra by Diophantus). Cairo: L'Organisme Egyptien du Livre. 253 pp. Contains the text of DIOPHANTUS' four books of arithmetic, the only known translation of which is this Arabic one of the 10th century. Roshdi Rashed, the editor, also provides an introduction. See the critical review in Isis 68, 627-630. (ACL). #978.
- TARWATER DALTON editor 1977 The bicentennial tribute to American mathematics, 1776-1976. Papers presented at the fifty-ninth annual meeting of the Mathematical Association of America commemorating the nation's Bicentennial. (Math. Assoc. of America). 225 pp. Seven major papers in history of AMERICAN MATHEMATICS are presented. Those not previously published elsewhere and abstracted are abstracted below. The historical papers are followed by proceedings of panel discussions and a brief account of the last 10 years of TWO-YEAR COLLEGE MATHEMATICS. (ACL). #979.
- GRABINER JUDITH V 1977 Mathematics in America: The first hundred years. In #979, 9-24. The factors in AMERICAN MATHEMATICS, 1776 to 1886, are described which led to a mature mathematical community by the 1890s. (ACL). #980.
- BIRKHOFF GARRETT 1977 Some leaders in AMERICAN MATHEMATICS: 1891-1941. In #979, 25-78. An account of some 40 mathematicians is given in the context of the growth of American mathematics. Of special value are the recollections, some recorded here for the first time, of the author's own experiences and of his father G.D. BIRKHOFF. (ACL). #981.
- REES MINA S 1977 Mathematics and the GOVERNMENT: The post-war years as augury of the future. In #979, 101-116. Emphasis is given in this account to the beginnings of substantial government support of mathematical research principally through the Office of Scientific Research and Development, and the Office of Naval Research whose Mathematics Branch the author headed. (ACL). #982.
- HAMMING R W 1977 The history of COMPUTING in the United States. In #979, 117-128. With some historiographical remarks, a chronological account is given of the "hardware," "software," and uses of computers from the nineteenth century to the present. (ACL). #983.
- LAX PETER D 1977 The bomb, Sputnik, computers, and European mathematicians. In #979, 129-135. The items listed in the title are, in the author's opinion, "the principal tangible causes" of the changes in AMERICAN MATHEMATICS, 1940-1960. The author also remarks, from a refugee's point of view, on the effect of the periods of antisemitism and McCarthyism. (ACL). #984.
- RASHED ROSHDI 1974 Les travaux perdus de Diophante (I). Revue d'Histoire des Sciences 27, 97-122. The discovery of the four books of DIOPHANTUS' Arithmetic in Arabic translation causes a reconsideration of the author and his works. The first book is presented here. (ACL). #985.

- RASHED ROSHDI 1975 Les travaux perdus de Diophante (II). Revue d'Histoire des Sciences 28, 3-30. A continuation of #985 the remaining three books are here presented. (ACL). #986.
- MACK J M 1974 Those numbers and e. Australian Mathematics Teacher 30, 97-105. Based on a talk given to students. (ACL). #987.
- WATSON JANE M 1974 Three WOMEN of mathematics. Australian Math Teacher 30, 153-160. HYPATIA, M.G. GANESI, EMMY NOETHER. (ACL). #988.
- BERGHOUT R F 1974 The historical development of magnitudes, ratios, and proportions. Australian Math Teacher 30, 184-196. GREEK MATHEMATICS. (ACL). #989.
- MACDONALD I D 1976 Modern ALGEBRA in the nineteenth century. Australian Math Teacher 32, 33-38. (ACL). #990.
- MONRO G P 1976 HILBERT and GÖDEL: The recent history of the AXIOMATIC METHOD. Australian Math Teacher 32, 103-106. (ACL). #991.
- JAIN B S 1977 On the GANITA-SARA-SAMGRAHA of MAHAVIRA (ca. 850 A.D.). Indian Journal of History of Science 12, 17-32. INDIAN, JAINA MATHEMATICS. A commentary on this algebraic and geometrical treatise. (ACL). #992.
- BAG A K 1977 The method of integral solution of INDETERMINATE EQUATIONS of the type: $By = Ax + c$ in ancient and medieval INDIA. Indian Journal of History of Science 12, 1-16. ARYABHATA I (476 AD). CONTINUED FRACTIONS. Passages in Sanskrit with English translation are given of the Karanapaddhati (1596 AD?). (ACL). #993.
- BEHARI RAM & JAIN B S 1977 Some mathematical contributions of ANCIENT INDIAN MATHEMATICIANS as given in the works of BHASKARACARYA II (12th century A.D.). Indian Journal of History of Science 12, 45-56. Emphasis is given to the cyclic method for solving the quadratic equation, $Nx^2 + K = y^2$. (ACL). #994.
- JAIN L C 1977 Divergent sequences locating TRANSFINITE SETS in TRILOKASARA. Indian Journal of History of Science 12, 57-75. A Prakrit text of the 11th century A.D. is described which parallels the program of G. CANTOR and ZERMELO, that was opposed by BOREL, BAIRE, and LEBESGUE, with respect to well-ordered sequences. (ACL). #995.
- BORGWANDT HEIDEMAIRE 1975 Die historische Entwicklung der Funktionanalysis zu einer selbständigen mathematischen Disziplin. NTM Z. Gesch. Naturwiss. Tech. Med. 12, 1-11 (The historical development of FUNCTIONAL ANALYSIS into an independent mathematical discipline.) CB 102, 211. (ACL). #996.
- MAINZER KLAUS 1976 Das Begründungsproblem des mathematischen Kontinuums in der neuzeitlichen Entwicklung der Grundlagenforschung. Philosophia Naturalis 16, 125-137. (The foundational problem of the mathematical CONTINUUM in the modern development of research in foundations.) CB 102, 224. (ACL). #997.
- DIBBLE WILLIAM E 1976 A possible PYTHAGOREAN TRIANGLE at Stonehenge. J. History of Astronomy 17, 141-142. CB 102, 689. (ACL). #998.
- BRUINS EVERT M 1975 The part in ancient EGYPTIAN mathematics. Centaurus 19, 241-251 CB 102, 699. (ACL). #999.
- PARKER RICHARD A 1975 A mathematical exercise: P. Dem. Heidelberg 663. J. of Egyptian Archaeology 61, 189-196. CB 102, 701. (ACL). #1000.
- SESIANO JACQUES 1975 The Arabic text of Books IV to VII of DIOPHANTUS' Arithmetica in the translation of Qustá Ibn Lúqá, with translation and commentary. 438 pp. Dissertation at Brown University, 1975. (Dissertation Abstracts 37: 555-A. Order No. 76-15, 709). (ACL). #1001.
- GUINIVEN JOHN J 1975 Mathematical ontology in ARISTOTLE. 154 pp. Dissertation at the Univ. of Massachusetts. (Dissertation Abstracts 36: 6144-A, Order No. 76-5338.) (ACL). #1002.

- KAYAS GEORGES J 1976 Aristote et les géométries non-euclidiennes avant et après Euclide. *Revue des Questions Scientifiques* 147: 175-194, 281-301. (ARISTOTLE and NON-EUCLIDEAN GEOMETRY before and after Euclid.) CB 102, 778. (ACL). #1003.
- McCLAIN ERNEST G 1974 Musical "marriages" in PLATO's Republic. *Journal of Music Theory* 18, 242-272. MATHEMATICAL ACOUSTICS. CB 102, 782. (ACL) #1004.
- STAMATAKOS BESS MAKRIS 1975 PLATO's THEORY OF NUMBERS. Dissertation at Michigan State Univ. 163 pp. (Dissertation Abstracts 36: 8117-A. Order No. 76-12527.) (ACL). #1005.
- WHITE F C 1975 PLATO on GEOMETRY. *Apeiron* 9, 5-14. CB 102, 800. (ACL). #1006.
- FREGUGLIA PAOLO 1974 Osservazioni sul procedimento di Leonardo Pisano per la determinazione di Cultura e Scuola 13, 209-221. CB 102, 914. FIBONACCI. PI. (ACL). #1007.
- WAGNER DONALD B. 1975 Proof in ANCIENT CHINESE MATHEMATICS: LIU HUI on the volumes of rectilinear solids. Dissertation at University of Copenhagen. 73 pp. CB 102, 1038. (ACL). #1008.
- COUMET ERNEST 1975 Cryptographie et numérations. *Annales: Économies, Sociétés, Civilizations* 30, 1007-1027. CRYPTOGRAPHY. CB 102, 1119. (ACL). #1009.
- MARGOLIN JEAN-CLAUDE 1976 L'enseignement des mathématiques en France (1540-1570): Charles de Bovelles, Fine, Peletier, Ramus. P., 109-155 in Peter Sharratt (ed.) French Renaissance studies 1540-70. Edinburgh (Univ. Edinburgh Press). CAROLI BOVILLUS ORONCE FINE. JACQUES PELETIER. PETRUS RAMUS. CB 102, 1132. (ACL). #1010.
- ROSSI FRANCESCO SAVERIO 1974 LEONARDO DA VINCI, studioso e ricercatore delle matematiche. *Cultura e Scuola* 13, 231-247. CB 102, 1149. (ACL). #1011.
- ROSSI FRANCESCO SAVERIO 1974 Nicolò Copernico, *Matematica: La sua trigonometria sferica*. *Cultura e Scuola* 13, 421-436. NICOLAUS COPERNICUS. CB 102, 1150. (ACL). #1012.
- VEDRINE H 1976 L'obstacle réaliste en mathématiques chez deux philosophes du XVIIe siècle: Bruno et Patrizi. Pp. 239-248 in Platon et Aristote à la Renaissance. Paris (Vrin). GIORDANO BRUNO. FRANCESCO PATRIZZI. CB 102, 1154. (ACL). #1013.
- WALKER D P 1976 La tradition mathématico-musicale du platonisme et les débuts de la science moderne. Pp. 249-260 in Platon et Aristote à la Renaissance. Paris (Vrin). PLATONISM. MUSIC. CB 102, 1157. (ACL). #1014.
- EARMAN JOHN 1975 Infinities, infinitesimals, and indivisibles: The Leibnizian labyrinth. *Studia Leibnitiana* 7, 236-251. G W LEIBNIZ. CB 102, 1395. (ACL). #1015.
- MILLER LARRY W 1975 KANT's PHILOSOPHY OF MATHEMATICS. *Kant-Studien* 66, 297-308. CB 102, 1404. (ACL). #1016.
- MILLIKEN STEPHEN F 1974 BUFFON's Essai d'arithmétique morale. Pp 197-206 in John Pappas (ed.) Essays on Diderot and the Enlightenment, in honor of Otis Fellows. (Histoire des idées et critique littéraire, 140.) Geneva (Droz). CB 102, 1405. (ACL). #1017.
- KENNEDY HUBERT 1978 Marx's mathematical manuscripts. *Science and Nature* 1, 59-62. KARL MARX. Annotated BIBLIOGRAPHY of the published manuscripts and 14 works about them. (ACL). #1018.
- LUTZ L et al. editors 1978 *Lexikon des Mittelalters, Bd. 1 Ägypten-Almohaden*. München/Zürich: Artemis Verlag. pp. 225-447. The second fascicle; for the first see #799. (ACL). #1019.

- SCHELLHAS WALTER 1975 Der Rechenmeister Adam Ries (1492 bis 1559) und der Bergbau. NTM-Schriftenr. Gesch. Naturwiss., Technik, Med, 12, 14-37. ADAM RIESE. Riese's work in MINING, 1524 to 1559, is presented with a bibliography of unpublished and published sources. (ACL). #1020.
- ECCARIUS WOLFGANG 1975 Der Techniker und Mathematiker August Leopold Crelle (1780-1855) und sein Beitrag zur Förderung und Entwicklung der Mathematik im Deutschland des 19. Jahrhunderts. NTM-Schriftenr. Gesch. Naturwiss., Technik, Med. 12, 38-49. (The engineer and mathematician AUGUST LEOPOLD CRELLE and his contribution to the support and development of mathematics in Germany in the 19th century.) (ACL). #1021.
- BIERMANN KURT-R 1977 C.F. GAUSS in seinem Verhältnis zur britischen Wissenschaft und Literatur. NTM-Schriftenr. Gesch. Naturwiss., Technik, Med. 14, 7-15. (CARL FRIEDRICH GAUSS in his relation to British science and literature.) (ACL). #1022.
- WATTENBERG, DIEDRICH 1977 Eine Totenmaske Isaac Newtons? NTM-Schriftenr. Gesch. Naturwiss., Technik, Med. 14, 43-46. (A death mask of ISAAC NEWTON?) (ACL). #1023.
- PAS PETER W. VAN DER 1975 Japanese students of mathematics at the University of Leiden during the Sakoku period. Japanese Studies in the Hist. of Science 14, 109-116. JAPAN. LEIDEN. CB 102, 1410. (ACL). #1024.
- ROSS RICHARD P 1975 The SOCIAL AND ECONOMIC CAUSES of the revolution in the mathematical sciences in midnineteenth century ENGLAND. Journal of British Studies 15, 46-66. CB 102, 1413. (ACL). #1025.
- SCHNEIDER IVO 1974 Beziehung zwischen mathematischer Praxis und reiner Mathematik im 17. Jh. Actes XIIIe Cong. Int. Hist. Sci., 1971, 5, 33-40. (Relation between practical mathematics and pure mathematics in the 17th CENTURY.) CB 102, 1414. (ACL). #1026.
- SPRINGER VERLAG 1978 MATHEMATICS CALENDAR 1979. A large format, colored, decorative calendar selling for \$7.50. One topic is illustrated and described for each month, from Sinai's billiard to Omar Khayyam. (ACL). #1027.
- VITA VINCENZO 1975 Gli Elements des coniques di BLAISE PASCAL. Cultura e Scuola 14, 186-200. CB 102, 1418. (ACL). #1028.
- YAGLOM I M 1977 FELIX KLEIN and SOPHUS LIE [In Russian]. (Mathematics and Cybernetics, No. 11) Moscow (Znanie). 64 pp. The author describes the interaction between schools of geometric thought in late 19th and early 20th centuries. GALOIS THEORY. B. RIEMANN. K. WEIERSTRASS. LEJEUNE-DIRICHLET. A F MÖBIUS. J. STEINER. C.G.J. JACOBI. A. CAYLEY. (Samuel Kotz). #1029.
- WEXELBLATT RICHARD editor 1978 Preprints: History of Programming Languages Conference. ACM SIGPLAN Notices 13(8), xi + 310 pp. The Conference was held in Los Angeles, June 1-3, 1978. This volume includes a summary of each language presented as well as the historical papers themselves: ALGOL 60 (PERLIS, A., and NAUR, P.); APL (FALKOFF, A.D., and IVERSON, K.E.); APT (ROSS, D.T.); BASIC (KURTZ, T.E.); COBOL (SAMMET, J.E.); FORTRAN (BACKUS, J.); GPSS (GORDON, G.); JOVIAL (SCHWARTZ, J.I.); LISP (McCARTHY, J.); PL/I (RADIN, G.); SIMULA (NYGAARD, K., and DAHL, O.-J.); and SNOBOL (GRISWOLD, R. E.). (H.S. Tropp). #1030.
- DAHL AUBREY 1978 The Last of the first. Datamation 24(6), 145-149. A UNIVAC II with its "5200 vacuum tubes, 18,000 crystal diodes, 184,000 magnetic cores, hundreds of feet of plumbing, and countless miles of wires," finally retired after 18 years of work. COMPUTERS. (H.S. Tropp). #1031.
- LIBES SOL 1978 The first ten years of amateur computing. Byte 3(7), 64,66,68,70-71. Begins with the founding of the AMATEUR COMPUTING SOCIETY and its Newsletter. COMPUTERS. MICROPROCESSORS. PHOTOGRAPHS. (H.S. Tropp). #1032.
- ROARK ANNE C 1978 The mathematician who may be this century's greatest. The Chronicle of Higher Education 17(1), 1-10, 11 (Sept. 5). Popular sketch of CHARLES

- FEFFERMAN, 1978 FIELDS MEDALIST. FOURIER ANALYSIS. AWARDS (H.S. Tropp). #1033.
- McALLISTER BYRON L 1978 Hyperspaces and multifunctions, the first half century (1900-1950). Nieuw Archief voor Wiskunde (3) 26, 309-329. "A function f that assigns to each element of a give set X a subset (sometimes possibly empty) of a given set Y is called a multifunction from X into Y ." TOPOLOGY. CONVERGENCE. POMPEIU D. HAUSDORFF F and his METRIC for sets. VIETORIS L. KURATOWSKI K. TIKHONOV A. BIBLIOGRAPHY of 65 items. (Leroy F. Meyers). #1034.
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