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. 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.

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

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 than it may ordinarily get in the Reviews 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.*

HUGHES, Barnabas 1975 A course in history of mathematics for mathematics teachers *HM* 2, 333-335 **HISTORY IN MATHEMATICS. EDUCATION. TEACHER EDUCATION.**

FLEGG, Graham 1975 History of mathematics course (AM289) at the Open University, Great Britain *HM* 2, 332-333 **HISTORY IN MATHEMATICS EDUCATION.**

SCRIBA, Christoph J 1975 The place and function of a "historical introduction" in the curriculum for mathematics students *HM* 2, 327-331 **HISTORY IN MATHEMATICS EDUCATION.**

WALLIS, Peter J 1975 The **BOOK SUBSCRIPTION LISTS** project -- its relevance for historians of mathematics *HM* 2, 321-325.

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A DÜRER.

MÜÜRSEPP, Peeter 1975 D'Alembert's letter to Euler of 3 March
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MIKOLÁS, M 1975 Some historical aspects of the development of
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M. RIESZ. A HAAR.

HERMELINK, Heinrich 1975 The earliest reckoning books exist-
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DIVISORS of $R_n = (10^n - 1)/9$.   *(J. H. Baumwell)*

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arithmetic *Isis* 66, 390-394 NUMERATION. XVII. OCTONARY
NUMERATION. Facsimile reproduction of two pages of notes in a
contemporary volume.

BIRKHOFF, Garrett and Sue Ann GARWOOD, editors 1975 *Proceedings of the American Academy Workshop on the Evolution of Modern Mathematics held at the American Academy in Boston, Massachusetts, August 7-9, 1974. HM 2*, 425-615 MEETINGS. With a foreword by John VOSS, introductions to the Parts (A: Historiography; B: History of Foundations; C: Foundations; D: Algebra; E: Analysis) by Birkhoff, additional discussion questions by Garwood, and bibliographies by the editors. Discussion after most papers.

GRABINER, J V 1975 The mathematician, the historian and the history of mathematics *HM 2*, 439-447 HISTORIOGRAPHY.

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KOPPELMAN, Elaine 1975 Progress in mathematics *HM 2*, 457-463 HISTORIOGRAPHY. HISTORICAL THEORY.

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FREUDENTHAL, Hans 1975 The cradle of modern TOPOLOGY, according to Brouwer's inedita *HM 2*, 495-502 L E J BROUWER. With FACSIMILE of a letter to D HILBERT.

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KOPELL, Nancy and Gabriel STOLZENBERG 1975 Commentary on
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TOPOLOGY, and ANALYSIS. *HM* 2, 537-548 HISTORICAL THEORY.
Stresses the concept of FUSION OF THEORIES, CENTERS OF
ATTRACTION, and CENTERS OF RADIATION.

BAKER, Alan 1975 Some historical remarks on NUMBER THEORY
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555-562 HISTORICAL THEORY. GENERALIZATION. SPECIALIZATION.

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CONCRETE ANALYSIS in XX century mathematics *HM* 2, 577-590
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TECHNOLOGY.

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APOLLONIUS. PAPPUS. PTOLEMY. PROCLUS. THEODOSIUS. HERON.
NICHOMACHUS. DIOPHANTUS. ERATOSTHENES. HIPPARCHUS among
others. This is a sourcebook, containing several complete
translations (up to some obscure or uninteresting passages),
with introductory notes, individual bibliographies and footnotes
by the compiler. Some of the translations are very old, as the
one of Dioscoride's Περὶ ὕλης ἰατρικῆς, published by Andrés
Laguna in 1555 (Antwerp), and some of them appear for the first
time in Spanish.   *(Víctor S. Albis)*

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A discussion of C S PEIRCE'S early writing on LOGIC showing
how his interest in the logic of RELATIVES emerged from his
consideration of dyadic relations. The traditional syllogism
only deals with propositions of concurrence, but is unable to
deal with propositions of opposition. Further, it must be
supplemented with a new form of SYLLOGISM (what Peirce refers
to as a "double subsumption of the case under the rule") in
order to handle the arguments used in mathematical demonstrations.
It is also shown that it is very likely that Peirce developed
his logic of relations entirely independently of A DE MORGAN'S
seminal memoir on RELATIONS of 1859.   *(C. V. Jones)*

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Ayoub, R *HM* 2, 390.   *(H. S. Tropp)*

SCHAAF, William L 1975 Postal history of mathematics *School
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black and white illustrations of stamps with some historical
comments.   *(J. K. Bidwell)*

DRAKE, Stillman 1975 Impetus theory reappraised *Journal of
the History of Ideas* 36:1 (1975) 27-46 EUCLID'S ELEMENTS,
DESCARTES, PIERRE GASSENDI, G B BALIANI, HONORÉ FABRI, G B
BENEDETTI, TORRICELLI, ALBERT OF SAXONY, NICOLE ORESME,
LEONARDO DA VINCI, PIERRE CAZRÉ, FRANCISCUS DE MARCHIA, JEAN
BURIDAN, ARITHMETIZATION OF THE CONTINUUM, TARTAGLIA, JACQUES
ALEXANDRE LE TENNEUR. By analyzing published material, notably
that of BURIDAN and ALBERT OF SAXONY, it is shown that the
Medievalist had a view of IMPETUS THEORY based on QUANTUM JUMPS
of velocity. This introduced discontinuity into the acceleration
in free fall and is the key to understanding MEDIEVAL impetus
theory, and therefore cannot be the source from which Galileo
derived his continuous theory of FREE FALL.
                                                (C. V. Jones)

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MATHEMATICS, SOCIOLOGY OF MATHEMATICS, MATHEMATICS EDUCATION.
Sex differences in education as the root cause of sex differences
in mathematical employment and accomplishment. BIBLIOGRAPHY
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ment *Amer. Math. Monthly* 82, 701-730 APPORTIONMENT. A detailed
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determining the allocation to each state in the U.S. HOUSE OF
REPRESENTATIVES. Covers the periods 1792-1901 and 1910-1973 and
discusses methods used and recommended, including HAMILTON METHOD
(=VINTON METHOD), JEFFERSON METHOD (=METHOD OF GREATEST DIVISORS
=METHOD OF D'HONDT), WEBSTER METHOD (=METHOD OF MAJOR FRACTIONS),
MODIFIED VINTON METHOD, and the HUNTINGTON METHOD. The authors
discuss the problem of meeting constitution requirements, fair-
ness and the avoidance of the ALABAMA PARADOX for each of the
above and propose the QUOTA METHOD as a unique method best
satisfying the essential requirements. TABLES. BIBLIOGRAPHY.
(H.S. Tropp)

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ium with 950 figures, over 700 multi-coloured, and 56 plates."
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WORK covering "elementary mathematics", "steps toward higher
mathematics" (from set theory to mathematical optimization
through topics in undergraduate mathematics), and "brief reports
on selected topics" (e.g. number theory, measure theory, found-
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MATHEMATICS. SPHERICAL TRIGONOMETRY. XIV-XV.

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RUSSELL, C D BROAD, CONTINUUM. A discussion of C S PEIRCE's
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(C. V. Jones)

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FREE FALL. Analysis of unpublished manuscripts and replication
of experiments therein described show that Galileo discovered
the parabolic trajectory while conducting experiments to
establish a law of inertia.   (C. V. Jones)

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383 p This book is published by the section of the history of
natural sciences and technics of the Institute of History. It
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education in the USSR" written by A N KOLMOGOROV, and two parts:
(1)"Development of mathematical teaching in the general high
school", and (II)"Development of mathematical education in the
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contains PORTRAITS of activists in mathematical EDUCATION in
the USSR.   (B. M. Schein)

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116. ANAMORPHIC ART is art produced by PERSPECTIVE distortions
that are co-ordinate transformation; e.g., by reflecting the image
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of MICROCOMPUTERS and their applications.   *(C. V. Jones)*

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(S. M. Eisenberg)

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FREE FALL.   *(C. V. Jones)*

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WOLFF, OTTO MENCKE, *ACTA ERUDITORIUM*, ALGEBRA, MATHEMATICAL
METHOD, SYLLOGISM, R DESCARTES, E W TSCHIRNHAUS, LOGIC.
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Discusses the effect of isolation, the social system and
geography on the development of the data processing industry
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