Journals Published by the
American Mathematical Society

Bulletin of the
American Mathematical Society

This journal is the official organ of the Society. It reports official acts of the Society and the details of its meetings. It contains some of the officially invited addresses presented before the Society, reviews of advanced mathematical books, research problems and a department of research announcements.

One volume of six numbers is planned for 1964. The subscription price is $7.00. The prices of back volumes, insofar as they are available, are as follows: vols 1–27, 29 (1894–1921, 1923), $23.50 each; vol. 28 (1922), $19.70; vols. 30–35 (1924–1929), $20.00 each; vols. 36–55 (1930–1949), $28.00 each; vols. 56–69 (1950–1963), $14.00 each.

Proceedings of the
American Mathematical Society

This journal is devoted entirely to research in pure and applied mathematics, and is devoted principally to the publication of original papers of moderate length. Volume 1 appeared in 1950. The journal contains a department called Shorter Notes. The purpose of this department is to publish very short papers of an unusually elegant and polished character, for which there is normally no other outlet.

One volume of six numbers is planned for 1964. The subscription price is $11.00. Vols. 1–14 (1950–1963) are available at $14.00 per volume.

Transactions of the
American Mathematical Society

This journal is devoted entirely to research in pure and applied mathematics, and includes in general, longer papers than the Proceedings.

Four volumes of three numbers each will be published in 1964. The price per volume is $8.00. All inquiries for volumes 1–69 should be directed to Johnson Reprint Corporation, 111 Fifth Avenue, New York 3, New York. Orders for volumes 70–109 should be directed to the American Mathematical Society; the price for back issues insofar as they are available is $4.00 per issue (vols. 78–89 contain 2 issues, vols. 70–77 and 90–109 contain 3 issues).

Mathematical Reviews

This journal is devoted to abstracts and reviews of the current mathematical literature of the world. Two volumes will be published in 1964, Volume 27 and Volume 28. Each volume will consist of 6 regular issues plus an index issue. In each regular issue the abstracts and reviews are grouped under subject headings. Publication began in 1940.

Subscription price per volume of 7 issues is $50.00; 2 volumes per year $100.00. Back issues: volumes 1–16 (1940–1955), $42.00 per volume; volumes 17–26 (1956–1963), $50.00 per volume.

Published monthly by the American Mathematical Society. Subscriptions for Journals published by the American Mathematical Society should be addressed to American Mathematical Society, 190 Hope Street, Providence, Rhode Island 02906.

Copyright © 1964 American Mathematical Society
All rights reserved
Printed in Israel
By the Jerusalem Academic Press, Ltd.
Journals Published by the American Mathematical Society

Soviet Mathematics—Doklady

This journal contains the entire pure mathematics section of the Doklady Akademii Nauk SSSR in translation. It appears six times a year, each bimonthly issue corresponding to one volume of the Soviet Doklady. (The Doklady Akademii Nauk SSSR is issued three times a month, six issues constituting a volume.)

Subscription price in 1964: $35.00 per annual volume. Volumes 1, 2, 3 and 4 (1960–1963) are available at $40.00 per volume or $7.00 per issue.

Notices of the American Mathematical Society

This journal announces the programs of the meetings of the Society. It carries the abstracts of all contributed papers presented at the meetings of the Society and publishes news items of interest to mathematicians.

Subscription price is $7.00 per annual volume. A single copy is $2.00. Orders for back volumes (back issues of the last two years only are available) are $14.00 per volume.

All communications should be addressed to the Editor, 190 Hope Street, Providence, Rhode Island 02906. News items and insertions for each issue must be in the hands of the editor on or before the deadline for the abstracts for papers to be presented at the meetings announced in that issue. These deadlines are published regularly on the back of the title page.

Mathematics of Computation

A journal devoted to original papers in numerical analysis, the application of numerical methods and high-speed calculator devices, the computation of mathematical tables, the theory of high-speed calculating devices and other aids to computation. In addition it publishes reviews and notes in these and related fields. Published by the Society for the National Academy of Sciences, National Research Council.

The subscription price is $8.00 per volume of 4 issues. Single copies are $2.50. Back issues insofar as they are available: (1943–1963) $3.00 per issue; $12.00 per volume. Write for specific information concerning availability.

Chinese Mathematics—Acta

This is a cover to cover translation into English of Acta Mathematica Sinica, published by Academia Sinica, Peking, People’s Republic of China. Acta Mathematica Sinica contains current research in all fields of pure mathematics. Vols. 1, 2, and 3 (1962–1963) $30.00 per volume. Single issue price: one third of volume price. (Vol. 1 has three issues; vols. 2 and 3 have four issues each.)

Subscription price per current volume $20.00.
CONTENTS

Vol. 111, No. 1 APRIL, 1964 Whole No. 343

Semi-translation planes
By T. G. Ostrom .................................................. 1
Coordinate systems of some semi-translation planes
By D. L. Morgan and T. G. Ostrom ............................... 19
Total positivity, absorption probabilities and applications
By Samuel Karlin .................................................. 33
Manifolds which are joins
By K. W. Kwun and Frank Raymond ............................ 108
Some uncomplemented function algebras
By I. Glicksberg .................................................. 121
Homotopy classification of maps by cohomology homomorphisms
By Emery Thomas ................................................ 138
On the characterization of spectral operators
By Shmuel Kantorovitz ......................................... 152

Mathematical papers intended for publication in the TRANSACTIONS should be addressed to one of the editors: Papers in analysis and applied mathematics to Lipman Bers, Courant Institute of Mathematical Sciences, New York University, 4 Washington Place, New York 3, New York.

Papers in algebra, logic and number theory to Daniel Zelinsky, Department of Mathematics, Northwestern University, Evanston, Illinois.

Papers in statistics and probability to Michel Loeve, Department of Statistics, University of California, Berkeley 4, California.

Papers in geometry and abstract analysis to I. M. Singer, Department of Mathematics, Massachusetts Institute of Technology, Cambridge 39, Massachusetts.

Papers in topology to W. S. Massey, Department of Mathematics, Box 2155, Yale Station, Yale University, New Haven, Connecticut.

All communications relating to Memoirs should be addressed to Lipman Bers, Courant Institute of Mathematical Sciences, New York University, 4 Washington Place, New York 3, New York.

All other communications to the editors should be addressed to the Managing Editor, Daniel Zelinsky.

All papers should be typewritten, double spaced, and the author should keep a complete copy.

Transactions of the American Mathematical Society is indexed regularly by Engineering Index, Inc.