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, and a department of research announcements.

The subscription price is \$12.00 per annual volume of six numbers.

Invited Addresses offered for publication should be sent to MURRAY GERSTEN-HABER, Department of Mathematics, University of Pennsylvania, Philadelphia, Pennsylvania 19104.

Book Reviews should be sent to GIAN-CARLO ROTA, Mathematics Department, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139. All Research Announcements should be sent to M. H. PROTTER, Department of

Mathematics, University of California, Berkeley, California 94720.

All other communications to the editors should be sent to the Managing Editor, MURRAY GERSTENHABER, at the above address.

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. A department called Shorter Notes was established for the purpose of publishing very short papers of an unusually elegant and polished character, for which there is normally no other outlet.

Papers in algebra, number theory, and algebraic geometry should be sent to ARTHUR P. MATTUCK, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts or IRVING REINER, Department of Mathematics, University of Illinois, Urbana, Illinois; in modern or classical analysis to IRVING GLICKSBERG, Department of Mathematics, University of Washington, Seattle, Washington 98105 or to W. H. J. FUCHS, White Hall, Cornell University, Ithaca, New York 14850; in set-theoretic and general topology to ERNEST A. MICHAEL, Department of Mathematics, University of Washington, Seattle, Washington 98105; in algebraic topology and all other geometry to P. EMERY THOMAS, Department of Mathematics, University of California, Berkeley, California 94720; in applied mathematics, differ-ential equations, and related areas of analysis to WolfGANG WASOW, Mathematics Department, University of Wisconsin, Madison, Wisconsin 53706; in probability, statistics, and related fields to JOSHUA CHOVER, Mathematics Department, University of Wisconsin, Madison, Wisconsin 53706; in logic, set theory, and related areas to W. W. BOONE, Mathematics Department, University of Illinois, Urbana, Illinois 61801. All other communications should be addressed to the Managing Editor, ARTHUR MATTUCK.

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.

Papers in analysis and applied mathematics should be sent to J. J. KOHN, Depart-ment of Mathematics, Brandeis University, Waltham, Massachusetts 02154; in topology to FRANKLIN PETERSON, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139; in algebra, number theory, and logis to D. A. BUGNELLY, Department of Mathematics Personals University and logic to D. A. BUCHSBAUM, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154; in geometry and abstract analysis to R. S. PALAIS, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154; in statistics and probability to H. P. MCKEAN, Department of Mathematics, Rocke-feller University, New York, New York 10021; in mathematical logic and foundations to DANA SCOTT, Department of Mathematics, Stanford University, Stanford, Cali-fornia 94305. All other communications to the editors should be addressed to the Managing Editor, DANA SCOTT.

Soviet Mathematics—Doklady

SOVIET MATHEMATICS—DOKLADY is a translation journal containing the entire pure mathematics section of the DOKLADY AKADEMI NAUK SSSR, the Reports of the Academy of Sciences of the USSR. The DOKLADY for a year contains about 500 articles, each about 4 pages long. Issued bimonthly.

Mathematical Reviews

This journal is devoted to abstracts and reviews of the current mathematical literature of the world. Two volumes of MATHEMATICAL REVIEWS will be published in 1969, Volume 37, and Volume 38. 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.

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 mathematical scientists.

All communications should be addressed to the Editor, P.O. Box 6248, Providence, Rhode Island 02904. News items and insertions for each issue must be in the hands of the editor on or before the deadline for the abstracts for the papers to be presented in 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.

Prospective publications should be addressed to the Editor, Professor Eugene Isaacson, Courant Institute of Mathematical Sciences, New York University, 251 Mercer Street, New York, New York 10012. The author may suggest the name of an editor for review of his paper.

New Publications

This quarterly journal announces new books and journals in all fields of higher mathematics, including a section on both forthcoming and recently published books. The information is acquired from several sources, such as pamphlets and catalogs received from publishers and book dealers from many parts of the world.

Mathematics of the USSR-Izvestija

This journal is a cover-to-cover translation of Izvestija Akademii Nauk SSSR Seri'a Matematičeskaja, published bimonthly by the Academy of Sciences of the USSR. It is a journal of current research in all fields of pure mathematics. Starting with Volume 1, Number 1, January-February 1967, which corresponds to the Russian original Tom 31, Number 1. the translation is prepared by the Plenum Publishing Corporation with the cooperation of the American Mathematical Society, and is published bimonthly by the American Mathematical Society.

Mathematics of the USSR-Sbornik

This journal is a cover-to-cover translation of Matematičeskiľ Sbornik (New Series), published monthly by the Moscow Mathematical Society and the Academy of Sciences of the USSR. It is a journal of current research in all fields of pure mathematics. The translation is published monthly starting with Volume 1, Number 1, January 1967, which corresponds to the Russian original Tom 72 (114), No. 1.

CONTENTS—continued from back cover

L. D. Loveland. Cross sectionally continuous spheres in E^3	396
Lawrence Fearnley. The pseudo-circle is unique	398
Walter L. Baily, Jr. An exceptional arithmetic group and its	
Eisenstein series	402
Herman Gluck. Piecewise linear groups and transformation	
groups	407
Yung-Chow Wong. Euclidean n-planes in pseudo-Euclidean spaces	
and differential geometry of Cartan domains	409
Erwin Kleinfeld, Margaret Humm Kleinfeld and J. Frank Kosier.	
The structure of generalized accessible rings	415
R. L. Graham and B. L. Rothschild. Ramsey's theorem for n-dimen-	
sional arrays	418
Arlo W. Schurle. Decompositions of E^3 into points and countably	
many trees	422
Charles H. Giffen. Desuspendability of free involutions on Brieskorn	
spheres	426
Curtis Outlaw and C. W. Groetsch. Averaging iteration in a Banach	
space	430
W. F. Pfeffer. An integral in topological spaces.	433
James D. Stein, Ir. On generalized complete metric spaces	439
Ronnie Lee. Differentiable classification of some topologically linear	
actions	441
Sue-Chin Lin. On smoothness of gentle perturbations	445
Johannes C. C. Nitsche, A variational problem with inequalities as	
boundary conditions	450
Steve Armentrout Cellular decompositions of 3-manifolds that yield	150
3-manifolds	453
Meluzin S. Berrer On one parameter families of real solutions of	455
nonlinear operator equations	456
Hons Rud Weber Canonical theory of the nonnarametric La	-150
grangian multiple integral problems with variable boundaries	160
grangian multiple integral producting with variable boundaries	400
Navier Stokes equation in a ner culturation of weak solutions of the	16E
Travier-Stokes equation in a noncyindrical domain	400
Erratum, volume /4	408

The members of the Council for 1969 are: R. D. Anderson, Louis Auslander, Hyman Bass, P. T. Bateman, D. H. Blackwell, Armand Borel, Raoul H. Bott, Felix Browder, William Browder, E. H. Brown, Jr., David Buchsbaum, Paul J. Cohen, H. S. M. Coxeter, Avner Freidman, K. O. Friedrichs, W. H. J. Fuchs, F. W. Gehring, Murray Gerstenhaber, Leonard Gillman, Wallace Givens, Irving Glicksberg, P. R. Halmos, O. G. Harrold, I. N. Herstein, Eugene Isaacson, Victor Klee, J. J. Kohn, Ray A. Kunze, Serge Lang, George Mackey, Saunders MacLane, W. T. Martin, A. P. Mattuck, H. P. McKean, Jr., E. Michael, C. B. Morrey, Jr., J. K. Moser, R. S. Palais, Frank Peterson, R. S. Pierce, Everett Pitcher, Murray Protter, Irving Reiner, Gian-Carlo Rota, J. T. Schwartz, Dana Scott, George Seligman, Stephen Smale, N. E. Steenrod, Michio Suzuki, P. E. Thomas, W. R. Wasow, Bertram Yood, Oscar Zariski.

CONTENTS

March, 1969

D. C. Spencer. Overdetermined systems of linear partial differential	
equations	179
R. Thom. Ensembles et morphismes stratifies	240
F. J. Almgren, Jr. Measure theoretic geometry and elliptic varia-	
tional problems	285
Wilhelm Magnus. Residually finite groups	305
The November Meeting in Evanston	317
A. Ben-Israel, A. Charnes and K. O. Kortanek. Duality and asymp-	
totic solvability over cones	318
Gian-Carlo Rota. Baxter algebras and combinatorial identities. I	325
Gian-Carlo Rota. Baxter algebras and combinatorial identities. II.	330
J. B. Diaz and Joyce R. McLaughlin. Sturm comparison theorems	
for ordinary and partial differential equations	335
Giacomo Della Riccia. Iteration of analytic mappings of several	
complex variables	340
P. L. Antonelli. On the stable diffeomorphism of homotopy spheres	
in the stable range, $n < 2p$	343
W. G. Dotson, Jr. An application of ergodic theory to the solution	
of linear functional equations in Banach spaces	347
Paul S. Muhly. Commutants containing a compact operator	353
Joe W. Jenkins. An amenable group with a nonsymmetric group	
algebra	357
John Cossey, Sheila Oates Macdonald and Anne Penfold Street. On	
the laws of certain linear groups	361
R. Bojanic and R. DeVore. A proof of Jackson's theorem	364
John A. Little. On singularities of surfaces in E^4	368
Norman Hosay. A proof of the slicing theorem for 2-spheres	370
W. T. Eaton. Cross sectionally simple spheres	375
J. A. Pfaltzgraff and Bernard Pinchuk. Constrained extremal prob-	
lems for classes of meromorphic functions	379
Keith Phillips. Maximal functions for a class of locally compact non-	
compact groups	384
John E. Brothers. Rectifiability and integralgeometric measures in	
homogeneous spaces	387
Karl Heinrich Hofmann and Paul S. Mostert, About the cohomology	
ring of a finite abelian group.	391

Continued on inside back cover

GEORGE BANTA COMPANY, INC., MENASHA, WISCONSIN