VOLUME 76 (Whole No. 724)

NUMBER 1 JANUARY, 1970

BULLETIN

of the

American Mathematical Society

Edited by

GIAN-CARLO ROTA M. H. PROTTER MURRAY GERSTENHABER

Published by the American Mathematical Society

PROVIDENCE, RHODE ISLAND

AMERICAN MATHEMATICAL SOCIETY

General Office: P.O. Box 6248, Providence, Rhode Island 02904

Executive Director: G. L. Walker Officers:

President: Oscar Zariski, Department of Mathematics, Harvard University, Cambridge, Massachusetts 02138.

President Elect: Nathan Jacobson, Department of Mathematics, Yale University,

New Haven, Connecticut 06520.

Secretary: Professor Everett Pitcher, Department of Mathematics, Lehigh University.

Bethlehem, Pennsylvania 18015. Treasurer: Professor W. T. Martin, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.

Associate Secretaries:

Professor P. T. Bateman, Department of Mathematics, University of Illinois, Urbana, Illinois 61803.

Professor Leonard Gillman, Department of Mathematics, University of Rochester.

Rochester, New York 14627. Professor O. G. Harrold, Jr., Department of Mathematics, Florida State University,

Tallahassee, Florida 32306.

Professor R. S. Pierce, Department of Mathematics, University of Washington, Seattle. Washington 98105.

Editors:

Executive Editor of Mathematical Reviews: Richard Crittenden, 416 Fourth Street, Ann Arbor, Michigan 48103.

Editor of Translations Projects: S. H. Gould, P.O. Box 6248, Providence, Rhode Island 02904.

Managing Editor of the Bulletin: Professor Murray Gerstenhaber, Department of Mathematics, University of Pennsylvania, Philadelphia, Pennsylvania 19104. Managing Editor of the Proceedings: Professor W. H. J. Fuchs, Department of Mathematics, White Hall, Cornell University, Ithaca, New York 14850.

Managing Editor of the Transactions: Professor Dana Scott, Department of Mathematics, Stanford University, Stanford, California 94305.

Chairman, Mathematical Reviews Editorial Committee: Professor Richard Pierce,

Department of Mathematics, University of Washington, Seattle, Washington 98105.

Chairman, Colloquium Editorial Committee: Professor George Mackey, Department of Mathematics, Harvard University, Cambridge, Massachusetts 02138. Chairman Mathematical Surveys Committee: Bertram Yood, Department of

Mathematics, University of Oregon, Eugene, Oregon 97403.
Chairman, Mathematics of Computation Editorial Committee: Professor Eugene Isaacson, University Computing Center, Courant Institute of Mathematical Sciences, New York University, New York, New York 10012.

Representatives of the Society on the Board of Editors of the American Journal of

Mathematics:

Professor Stephen Smale, Department of Mathematics, University of California, Berkeley, California 94720.

Professor Raoul H. Bott, Department of Mathematics, Harvard University, Cambridge, Massachusetts 02138. Council Members: See inside back cover.

The annual dues of members of the Society are \$20.00, payable to the American Mathematical Society, P.O. Box 6248, Providence, Rhode Island 02904.

THE BULLETIN OF THE AMERICAN MATHEMATICAL SOCIETY is published bimonthly in January, March, May, July, September, and November. Price per annual volume is \$12.00. Subscriptions, orders for back numbers, and inquiries in regard to non-delivery of current numbers should be addressed to the American Mathematical Society, 321 South Main Street, P.O. Box 6248, Providence, Rhode Island 02904.

Second-class postage paid at Providence, Rhode Island and additional mailing

offices.

BULLETIN

of the

American Mathematical Society

Edited by

GIAN-CARLO ROTA M. H. PROTTER

MURRAY GERSTENHABER

VOLUME 76
JANUARY to DECEMBER, 1970

Published by the American Mathematical Society

PROVIDENCE, RHODE ISLAND

The Collegin: Frees

George Banta Company, Inc

Menasha, Wisconsin