

BULLETIN
OF THE
AMERICAN
MATHEMATICAL SOCIETY

EDITED BY

EARLE R. HEDRICK
DAVID R. CURTISS WILLIAM R. LONGLEY

WITH THE ASSISTANCE OF

HAROLD T. DAVIS HARRY W. KUHN
THEOPHIL H. HILDEBRANDT DERRICK N. LEHMER
JOHN R. KLINE HENRY L. RIETZ
CAROLINE E. SEELY

VOLUME XXXIX, NUMBER 12

DECEMBER, 1933

PUBLISHED BY THE SOCIETY
MENASHA, WIS., AND NEW YORK

1933

Whole No. 411

PUBLISHED MONTHLY

\$9.00 a Year

Entered as second class matter April 24, 1926 at the post office at
Menasha, Wis., under the act of August 24, 1912.

AMERICAN MATHEMATICAL SOCIETY

Mail Address: 501 West 116th Street, New York, N.Y., for the Secretary, Treasurer, Librarian, and Clerk.

Office: Room 413, Physics Building, Columbia University, New York City.

President: Professor A. B. Coble, University of Illinois, Urbana, Ill.

Secretary: Dean R. G. D. Richardson, Brown University, Providence, R.I.

Associate Secretaries: Professor M. H. Ingraham, University of Wisconsin, Madison, Wis.; Professor J. R. Kline, University of Pennsylvania, Philadelphia, Pa.; Dean T. M. Putnam, University of California, Berkeley, Calif.

Treasurer: Professor G. W. Mullins, Barnard College in Columbia University, New York City.

Librarian: Professor R. C. Archibald, Brown University, Providence, R.I.

Clerk: Dr. Caroline E. Seely, 413 Physics Building, Columbia University, New York City.

Editor-in-Chief of the Bulletin: Professor E. R. Hedrick, University of California at Los Angeles, Los Angeles, Calif.

Managing Editor of the Transactions: Professor R. D. Carmichael, University of Illinois, Urbana, Ill.

Chairman, Colloquium Editorial Committee: Professor R. L. Moore, University of Texas, Austin, Tex.

Managing Editor of the American Journal of Mathematics: Professor Abraham Cohen, Johns Hopkins University, Baltimore, Md.

Representatives of the Society in the Division of Physical Sciences of the National Research Council: Professors A. B. Coble, E. R. Hedrick, and Dean R. G. D. Richardson.

Representatives on the Council of the American Association for the Advancement of Science: Professors Louis Ingold and M. H. Ingraham.

Chairman, Committee on Arrangements for the Semi-Centennial: Professor T. S. Fiske, Columbia University, New York City.