## THE

## **JOURNAL**

OF

# SYMBOLIC LOGIC

#### EDITED BY

ALONZO CHURCH

C. H. LANGFORD

Managing Editor: C. A. BAYLIS

#### Consulting Editors:

PAUL BERNAYS

ERNEST NAGEL

PAUL HENLE

EVERETT J. NELSON

S. C. KLEENE

Rózsa Péter

SUSANNE K. LANGER

W. V. QUINE

Saunders Mac Lane

BARKLEY ROSSER

ALFRED TARSKI

VOLUME 3

1938

Published quarterly by the Association for Symbolic Logic, Inc.
with the aid of subventions from

BROWN UNIVERSITY

INSTITUTE FOR ADVANCED STUDY PRINCETON UNIVERSITY

DUKE UNIVERSITY
HARVARD UNIVERSITY

SMITH COLLEGE

UNIVERSITY OF MICHIGAN

Copyright 1938 by the Association for Symbolic Logic, Inc.

THE JOURNAL OF SYMBOLIC LOGIC (ISSN print: 0022-4812, ISSN online: 1943-5886) is published quarterly, in the months of March, June, September, and December, by the Association for Symbolic Logic, Inc., 124 Raymond Avenue, Poughkeepsie, NY 12604-0001, USA. Periodicals postage is paid at Poughkeepsie NY and at additional mailing offices. The JOURNAL is distributed with THE BULLETIN OF SYMBOLIC LOGIC. The 2011 annual subscription price for the two journals, in either print or electronic form, is US\$615; visit http://www.aslonline.org/Journals-subscription.html for more information. Postmaster: Send address changes to The Journal of Symbolic Logic, c/o American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294, USA. Business correspondence should be sent to the Secretary-Treasurer of the Association, Charles Steinhorn (address on inside back cover).

The BULLETIN, the JOURNAL, and the REVIEW OF SYMBOLIC LOGIC are the official organs of the Association for Symbolic Logic, an international organization for furthering research in symbolic logic and the exchange of ideas among mathematicians, philosophers, computer scientists, linguists, and others interested in this field.

The JOURNAL invites submission of original scholarly work in mathematical logic and its applications.

Continued on inside back cover

10 9 8 7 6 5 4 3 16 15 14 13 12 11

#### THE

# **JOURNAL**

OF

# SYMBOLIC LOGIC

#### EDITED BY

ALONZO CHURCH

C. H. LANGFORD

Managing Editor: C. A. BAYLIS

### Consulting Editors:

PAUL BERNAYS

ERNEST NAGEL

PAUL HENLE

EVERETT J. NELSON

S. C. KLEENE

Rózsa Péter

SUSANNE K. LANGER

W. V. Quine

Saunders Mac Lane

BARKLEY ROSSER

ALFRED TARSKI

VOLUME 3

1938

Published quarterly by the Association for Symbolic Logic, Inc. with the aid of subventions from

BROWN UNIVERSITY

INSTITUTE FOR ADVANCED STUDY

DUKE UNIVERSITY
HARVARD UNIVERSITY

SMITH COLLEGE

PRINCETON UNIVERSITY

UNIVERSITY OF MICHIGAN

The four numbers of Volume 3 were issued at the following dates:

Number 1, March 23, 1938.

Number 2, June 30, 1938.

Number 3. October 6, 1938.

Number 4, January, 1939.

Number 4 is copyrighted 1939 by the Association for Symbolic Logic, Inc.

The paper used in this reprint is acid-free and falls within the guidelines established to ensure permanence and durability.  $\bigotimes$ 

10 9 8 7 6 5 4 3 16 15 14 13 12 11

## TABLE OF CONTENTS

New foundation of formal metamathematics. By L. Chwister and W. Hetper
Completeness of the propositional calculus. By W. V. Quine 3
Reviews 4
Third meeting of the Association for Symbolic Logic. By S. C. KLEENE 5
Abstracts of papers
Elections 6
Ein Verfahren der mathematischen Logik. By Józef Pepis 6
On finite and infinite modal systems. By C. West Churchman 7
Reviews 8
Notice of a meeting of the Association
The name relation and the logical antinomies. By K. REACH 9
Corrections to Canonical expressions in Boolean algebra. By ARCHIE
Blake 112
Reviews
On the theory of types. By W. V. Quine
The consistency of the ramified Principia. By FREDERIC B. FITCH 140
On notation for ordinal numbers. By S. C. KLEENE
Reviews 156
The Fifth International Congress for the Unity of Science (announce-
ment) 171
Institutional contributing subscribers to the JOURNAL 172
List of officers and members of the Association for Symbolic Logic 173
Additions and corrections to A bibliography of symbolic logic. By Alonzo
Church
Index of subjects
Index of reviews
Index of authors