

THE JOURNAL OF THE AUSTRALIAN MATHEMATICAL SOCIETY

VOLUME XXIV — (SERIES A) — PART 3

NOVEMBER 1977

BOLA O. BALOGUN	<i>Groups with large conjugacy classes</i>	257
J. M. MACK	<i>Simultaneous Diophantine approximation</i>	266
A. R. RAJWADE	<i>The Diophantine equation</i> $y^2 = x(x^2 + 21Dx + 112D^2)$ <i>and the conjectures of Birch and Swinnerton-Dyer</i>	286
MARCEL HERZOG and DAVID WRIGHT	<i>Characterization of a family of simple groups by their character table</i>	296
STEVE LIGH	<i>A note on semigroups in rings</i>	305
B. J. DAY	<i>Note on compact closed categories</i>	309
A. W. WICKSTEAD	<i>Weak and unbounded order convergence in Banach lattices</i>	312
V. KRISHNAMURTHY	<i>On the enumeration of homeomorphism classes of finite topologies</i>	320
JOHN HANNAH	<i>Maximal quotient rings of prime group algebras. II Uniform right ideals</i>	339
A. KARRASS and D. SOLITAR	<i>Subgroups with centre in HNN groups</i>	350
K. L. N. SWAMY and N. P. RAO	<i>Ideals in autometrized algebras</i>	362
B. A. ANDERSON and K. B. GROSS	<i>Starter-adder methods in the construction of Howell designs</i>	375

Published for
THE AUSTRALIAN MATHEMATICAL SOCIETY
by Jerusalem Academic Press — Jerusalem — Israel

THE JOURNAL

The Journal of the Australian Mathematical Society began publication in 1959, and from 1975 has appeared in two series, Series A (Pure Mathematics) and Series B (Applied Mathematics). Information about Series B may be found on the inside back cover.

Series A, Pure Mathematics

Two volumes of four parts each are published annually, at a price of A\$40 per volume in 1978. Authors submitting papers for publication should send two copies of the typescript, each containing an abstract and a subject classification (Amer. Math. Soc. (MOS), 1970), to the Editor or to an appropriate Associate Editor. Authors are asked to follow the instructions in the American Mathematical Society publication *A manual for authors of mathematical papers*, except as indicated on the back cover of this issue.

Editor of the Journal, Series A

J. B. Miller, Department of Mathematics, Monash University, Clayton, Victoria 3168

Associate Editors

J. N. Crossley—logic,
Department of Mathematics,
Monash University,
Clayton, Victoria 3168.

R. Tweedie — probability and
statistics,
Division of Mathematics
& Statistics,
CSIRO,
P.O. Box 1965,
Canberra City, A.C.T. 2601.

T. E. Hall—semigroups,
Department of Mathematics,
Monash University,
Clayton, Victoria 3168.

H. Lausch—algebra,
Department of Mathematics,
Monash University,
Clayton, Victoria 3168.

M. F. Newman—groups,
Department of Mathematics,
RSPS,
Australian National University,
P.O. Box 4,
Canberra, A.C.T. 2600.

J. Pitman—number theory,
Department of Pure
Mathematics,
University of Adelaide,
Adelaide, South Australia,
5001.

A. P. Robertson—functional
analysis,
School of Mathematical
and Physical Sciences,
Murdoch University,
Murdoch, W.A. 6153.

R. H. Street—categories,
School of Mathematics
& Physics,
Macquarie University,
North Ryde, N.S.W. 2113.

E. Strzelecki—analysis,
Department of Mathematics,
Monash University,
Clayton, Victoria 3168.

G. R. Morris — differential
equations,
Department of Mathematics,
University of New England,
Armidale, N.S.W. 2351.

J. Virsik — differential
geometry,
Department of Mathematics,
Monash University,
Clayton, Victoria 3168.

W. Wallis—combinatorics,
Department of Mathematics,
University of Newcastle,
Newcastle, N.S.W. 2308.

Assistant Editors

E. V. Dudley,
Department of Mathematics,
University of Melbourne,
Parkville, Victoria 3052.

P. J. Stacey,
Department of Mathematics,
La Trobe University,
Bundoora, Victoria 3083.

Correspondence concerning the printing of papers after their acceptance for publication should be addressed to one of the Assistant Editors.