## Pacific

## Journal of Mathematics

R. F. Arnold and A. P. Morse, Plus and times ..... 297
Edwin Buchman and F. A. Valentine, External visibility ..... 333
R. A. Czerwinski, Bonded quadratic division algebras ..... 341
W. R. Emerson, Averaging strongly subadditive set functions in unimodular amenable groups II ..... 353
L. Erbe, Existence of oscillatory solutions and asymptotic behavior for a class of third order linear differential equations ..... 369
K. R. Goodearl, Power-cancellation of groups and modules ..... 387
J. C. Hankins and R. M. Rakestraw, The extremal structure of locally compact convex sets ..... 413
Burrell W. Helton, The solution of a Stieltjes - Volterra integral equation for rings ..... 419
F. K. Hwang and S. Lin, Construction of 2-balanced ( $n, k, \lambda$ ) arrays ..... 437
Wei-Eihn Kuan, Some results on normality of a graded ring ..... 455
D. Landers and L. Rogge, Relations between convergence of series and convergence of sequences ..... 465
L. L. Larmore and R. D. Rigdon, Enumerating immersions and embeddings of projective spaces ..... 471
Douglas McMahon, On the role of an abelian phase group in relativized problems in topological dynamics ..... 493
Robert W. Miller, Finitely generated projective modules and TTF classes ..... 505
Yashaswini Mittal, A class of isotropic covariance functions ..... 517
A. G. Mucci, Another martingale convergence theorem ..... 539
Joan K. Plastiras, Quasitriangular operator algebras ..... 543
J. R. Quine, The geometry of $p\left(S^{1}\right)$ ..... 551
Tsuan Wu Ting, The unloading problem for severely twisted bars ..... 559

# PACIFIC JOURNAL OF MATHEMATICS <br> EDITORS 

Richard Arens (Managing Editor)
University of California
Los Angeles, California 90024

R. A. Beaumont

University of Washington
Seattle, Washington 98105

J. Dugundil

Department of Mathematics
University of Southern California
Los Angeles, California 90007

D. Gilbarg and J. Milgram<br>Stanford University<br>Stanford, California 94305

## ASSOCIATE EDITORS

E. F. Beckenbach<br>B. H. Neumann<br>F. Wolf<br>K. Yoshida

## SUPPORTING INSTITUTIONS

## UNIVERSITY OF BRITISH COLUMBIA <br> CALIFORNIA INSTITUTE OF TECHNOLOGY <br> UNIVERSITY OF CALIFORNIA <br> MONTANA STATE UNIVERSITY <br> UNIVERSITY OF NEVADA <br> NEW MEXICO STATE UNIVERSITY <br> OREGON STATE UNIVERSITY <br> UNIVERSITY OF OREGON <br> OSAKA UNIVERSITY

```
UNIVERSITY OF SOUTHERN CALIFORNIA
STANFORD UNIVERSITY
UNIVERSITY OF HAWAII
UNIVERSITY OF TOKYO
UNIVERSITY OF UTAH
WASHINGTON STATE UNIVERSITY
UNIVERSITY OF WASHINGTON
** * ** * *
```

The Supporting Institutions listed above contribute to the cost of publication of this Journal, but they are not owners or publishers and have no responsibility for its contents or policies.

Mathematical papers intended for publication in the Pacific Journal of Mathematics should be in typed form or offset-reproduced (not dittoed). double spaced with large margins. Underline Greek letters in red, German in green, and script in blue. The first paragraph or two must be capable of being used separately as a synopsis of the entire paper. Items of the bibhography should not be cited there unless absolutely necessary, in which case they must be identified by author and Journal, rather than by item number. Manuscripts, in duplicate, may be sent to any one of the four editors. Please classify according to the scheme of Math. Reviews, Index to Vol. 39. All other communications should be addressed to the managing editor, or Elaine Barth, University of California, Los Angeles, California, 90024.

100 reprints are provided free for each article, only if page charges have been substantially paid. Additional copies may be obtained at cost in multiples of 50.

The Pacific Journal of Mathematics is issued monthly as of January 1966. Regular subscription rate: $\$ 72.00$ a year ( 6 Vols., 12 issues). Special rate: $\$ 36.00$ a year to individual members of supporting institutions.

Subscriptions, orders for back numbers, and changes of address should be sent to Pacific Journal of Mathematics, 103 Highland Boulevard, Berkeley, California, 94708.

PUBLISHED BY PACIFIC JOURNAL OF MATHEMATICS, A NON-PROFIT CORPORATION Printed at Jerusalem Academic Press, POB 2390, Jerusalem, Israel.

