

# Pacific Journal of Mathematics

**CORRECTION TO: “ON AUTOMORPHISMS OF SEPARABLE  
ALGEBRAS”**

LINDSAY NATHAN CHILDS AND FRANK RIMI DEMEYER

# ERRATA

Correction to

## ON AUTOMORPHISMS OF SEPARABLE ALGEBRAS

L. N. CHILDS AND F. R. DEMEYER

Volume 23 (1967), 25-34

A. Magid has pointed out to us that Lemma 1.8 of [1] is not correct. In [2], Hochschild proves that in any simple algebra over a field every element is a sum of units. It is an elementary exercise to verify that in a finite direct sum of simple algebras every element is a sum of units if and only if at most one of the simple algebra summands is the field  $Z/(2)$  of two elements. We thus have the following correction of Lemma 1.8.

LEMMA 1.8'. *Let  $A$  be a separable algebra over the semi-local ring  $K$ , then every element in  $A$  is a sum of units if and only if every element in  $A/\text{Rad}(A)$  is a sum of units.*

The proof of Lemma 1.8' is the same as the proof of Lemma 1.8 which appears in [1]. Let  $Z_{(2)}$  be the localization of the integers at the prime (2), then the ring of integers  $A$  over  $Z_{(2)}$  in  $Q(\sqrt{17})$  is a separable  $Z_{(2)}$ -algebra with no idempotents but 0 and 1 but  $A/\text{Rad}(A) \cong Z/(2) \oplus Z/(2)$  so  $A$  is not generated by its units. These facts may be found on page 234-36 of [3]. It is therefore necessary to modify the definition of regular ring given in paragraph 2 on page 30 of [1] in order that Theorem 2.1  $R$  be correct. If  $A$  is a separable, finitely generated, projective  $R$ -algebra and the center of  $A$  is  $K$  then an  $R$ -subalgebra  $B$  of  $A$  is called regular in case  $B$  is separable over  $R$ , the only idempotents in the center of  $B \otimes_{B \cap K} K$  are 0 and 1, and every element in  $B$  is a sum of units in  $B$ .

### BIBLIOGRAPHY

1. L. N. Childs and F. R. DeMeyer, *On automorphisms of separable algebras*, Pacific J. Math. **23** (1967), 25-34.
2. G. Hochschild, *Automorphisms of simple algebras*, Trans. Amer. Math. Soc. **69** (1950), 292-301.
3. E. Weiss, *Algebraic number theory*, McGraw-Hill (1963).

Received March 5, 1969.

SUNY AT ALBANY, NEW YORK

COLORADO STATE UNIVERSITY, FORT COLLINS, COLORADO

# PACIFIC JOURNAL OF MATHEMATICS

## EDITORS

H. ROYDEN  
Stanford University  
Stanford, California

J. DUGUNDJI  
Department of Mathematics  
University of Southern California  
Los Angeles, California 90007

RICHARD PIERCE  
University of Washington  
Seattle, Washington 98105

BASIL GORDON  
University of California  
Los Angeles, California 90024

## ASSOCIATE EDITORS

E. F. BECKENBACH

B. H. NEUMANN

F. WOLF

K. YOSHIDA

## SUPPORTING INSTITUTIONS

UNIVERSITY OF BRITISH COLUMBIA  
CALIFORNIA INSTITUTE OF TECHNOLOGY  
UNIVERSITY OF CALIFORNIA  
MONTANA STATE UNIVERSITY  
UNIVERSITY OF NEVADA  
NEW MEXICO STATE UNIVERSITY  
OREGON STATE UNIVERSITY  
UNIVERSITY OF OREGON  
OSAKA UNIVERSITY  
UNIVERSITY OF SOUTHERN CALIFORNIA

STANFORD UNIVERSITY  
UNIVERSITY OF TOKYO  
UNIVERSITY OF UTAH  
WASHINGTON STATE UNIVERSITY  
UNIVERSITY OF WASHINGTON  
\* \* \*  
AMERICAN MATHEMATICAL SOCIETY  
CHEVRON RESEARCH CORPORATION  
TRW SYSTEMS  
NAVAL WEAPONS CENTER

---

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 content or policies.

---

Mathematical papers intended for publication in the *Pacific Journal of Mathematics* should be in typed form or offset-reproduced, 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. It should not contain references to the bibliography. Manuscripts, in duplicate if possible, may be sent to any one of the four editors. Please classify according to the scheme of Math. Rev. **36**, 1539-1546. All other communications to the editors should be addressed to the managing editor, Richard Arens, University of California, Los Angeles, California, 90024.

50 reprints are provided free for each article; additional copies may be obtained at cost in multiples of 50.

---

The *Pacific Journal of Mathematics* is published monthly. Effective with Volume 16 the price per volume (3 numbers) is \$8.00; single issues, \$3.00. Special price for current issues to individual faculty members of supporting institutions and to individual members of the American Mathematical Society: \$4.00 per volume; single issues \$1.50. Back numbers are available.

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 Kokusai Bunken Insatsusha (International Academic Printing Co., Ltd.), 7-17, Fujimi 2-chome, Chiyoda-ku, Tokyo, Japan.

|  |     |
|--|-----|
| George E. Andrews, <i>On a calculus of partition functions</i> .....   | 555 |
| Silvio Aurora, <i>A representation theorem for certain connected rings</i> .....   | 563 |
| Lawrence Wasson Baggett, <i>A note on groups with finite dual spaces</i> .....   | 569 |
| Steven Barry Bank, <i>On majorants for solutions of algebraic differential equations in regions of the complex plane</i> .....                         | 573 |
| Klaus R. Bichteler, <i>Locally compact topologies on a group and the corresponding continuous irreducible representations</i> .....                    | 583 |
| Mario Borelli, <i>Affine complements of divisors</i> .....   | 595 |
| Carlos Jorge Do Rego Borges, <i>A study of absolute extensor spaces</i> .....  | 609 |
| Bruce Langworthy Chalmers, <i>Subspace kernels and minimum problems in Hilbert spaces with kernel function</i> .....                                   | 619 |
| John Dauns, <i>Representation of L-groups and F-rings</i> .....  | 629 |
| Spencer Ernest Dickson and Kent Ralph Fuller, <i>Algebras for which every indecomposable right module is invariant in its injective envelope</i> ..... | 655 |
| Robert Fraser and Sam Bernard Nadler, Jr., <i>Sequences of contractive maps and fixed points</i> .....   | 659 |
| Judith Lee Gersting, <i>A rate of growth criterion for universality of regressive isols</i> .....  | 669 |
| Robert Fred Gordon, <i>Rings in which minimal left ideals are projective</i> .....   | 679 |
| Fred Gross, <i>Entire functions of several variables with algebraic derivatives at certain algebraic points</i> .....                                  | 693 |
| W. Charles (Wilbur) Holland Jr. and Stephen H. McCleary, <i>Wreath products of ordered permutation groups</i> .....                                    | 703 |
| W. J. Kim, <i>The Schwarzian derivative and multivalence</i> .....   | 717 |
| Robert Hamor La Grange, Jr., <i>On <math>(m - n)</math> products of Boolean algebras</i> .....   | 725 |
| Charles D. Masiello, <i>The average of a gauge</i> .....   | 733 |
| Stephen H. McCleary, <i>The closed prime subgroups of certain ordered permutation groups</i> .....   | 745 |
| Richard Roy Miller, <i>Gleason parts and Choquet boundary points in convolution measure algebras</i> .....   | 755 |
| Harold L. Peterson, Jr., <i>On dyadic subspaces</i> .....  | 773 |
| Derek J. S. Robinson, <i>Groups which are minimal with respect to normality being intransitive</i> .....   | 777 |
| Ralph Edwin Showalter, <i>Partial differential equations of Sobolev-Galpern type</i> .....   | 787 |
| David Slepian, <i>The content of some extreme simplexes</i> .....  | 795 |
| Joseph L. Taylor, <i>Noncommutative convolution measure algebras</i> .....   | 809 |
| B. S. Yadav, <i>Contractions of functions and their Fourier series</i> .....   | 827 |
| Lindsay Nathan Childs and Frank Rimi DeMeyer, <i>Correction to: "On automorphisms of separable algebras"</i> .....                                     | 833 |
| Moses Glasner and Richard Emanuel Katz, <i>Correction to: "Function-theoretic degeneracy criteria for Riemannian manifolds"</i> .....                  | 834 |
| Satish Shirali, <i>Correction to: "On the Jordan structure of complex Banach *algebras"</i> .....  | 834 |
| Benjamin Rigler Halpern, <i>Addendum to: "Fixed points for iterates"</i> .....   | 834 |