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Costa, R. [Costa, Roberto C. F.]

On the derivations of gametic algebras for polyploidy v

Bol. Soc. Brasil. Mat. **13** (1982), *no. 2*, 69–81.

Citations

From References: 2

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Costa, R. [Costa, Roberto C. F.] (BR-SPL)

On the derivation algebra of zygotie algebras for polyploidy with multiple alleles.

Bol. Soc. Brasil. Mat. **14** (1983), *no. 1*, 63–80.

The reviewer recently reviewed a paper in which the present author and several coauthors classified the derivations of the gametic polyploidy algebra [A. Micali, T. M. M. Campos, M. C. Costa e Silva, S. M. M. Ferreira and the author, *Comm. Algebra* **12** (1984), *no. 1*, 239–243; [MR0732196 \(85g:17014\)](#)]. There, the authors worked with the natural basis and it was pointed out that it would have been easier to deal with the canonical basis. The reviewer was thus surprised to see the present papers in which the present author actually does use canonical bases and does not understand why this was not done in the paper referred to above.

In the first paper under review the author deals with gametic algebras. He first proves a general theorem which says that every derivation in any baric algebra with a unique weight function maps every element into an element of weight 0. In particular this is true for genetic algebras. He then classifies the derivations for polyploidy algebras with multiple alleles. This is first done in earlier sections for multiple alleles alone and polyploidy alone.

In the second paper the author does the same thing for zygotie algebras. First, he shows that there is a monic Lie algebra map from the derivation algebra of an algebra to the derivation algebra of its duplicate. A counterexample shows that it is not necessarily surjective. The author then carries through the classification of the derivations for zygotie polyploidy algebras with multiple alleles. As in the first paper, he first deals with multiple alleles alone and polyploidy alone in earlier sections.

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