

THE GREATEST REGULAR-SOLID VARIETY OF SEMIGROUPS

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Abstract

A regular hypersubstitution is a mapping which takes every n_i -ary operation symbol to an n_i -ary term. A variety is called regular-solid if it contains all algebras derived by regular hypersubstitutions. We determine the greatest regular-solid variety of semigroups. This result will be used to give a new proof for the equational description of the greatest solid variety of semigroups. We show that every variety of semigroups which is finitely based by hyperidentities is also finitely based by identities.

Keywords: hypersubstitutions, terms, regular-solid variety, solid variety, finite axiomatizability.

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