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REGULAR ELEMENTS AND GREEN'S RELATIONS IN MENGER ALGEBRAS OF TERMS

Klaus Denecke

University of Potsdam, Institute of Mathematics
Am Neuen Palais, 14415 Potsdam, Germany

e-mail: kdenecke@rz.uni-potsdam.de

and

Prakit Jampachon

KhonKaen University, Department of Mathematics
KhonKaen, 40002 Thailand

e-mail: prajam@.kku.ac.th

Abstract

Defining an $(n+1)$-ary superposition operation S^n on the set $W_\tau(X_n)$ of all n-ary terms of type τ, one obtains an algebra $n-clone\ \tau := (W_\tau(X_n); S^n, x_1, \ldots, x_n)$ of type $(n+1, 0, \ldots, 0)$. The algebra $n-clone\ \tau$ is free in the variety of all Menger algebras ([9]). Using the operation S^n there are different possibilities to define binary associative operations on the set $W_\tau(X_n)$ and on the cartesian power $W_\tau(X_n)^n$. In this paper we study idempotent and regular elements as well as Green's relations in semigroups of terms with these binary associative operations as fundamental operations.

Keywords: term, superposition of terms, Menger algebra, regular element, Green's relations.

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