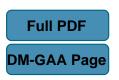
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# REGULAR ELEMENTS AND GREEN'S RELATIONS IN MENGER ALGEBRAS OF TERMS

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#### Abstract

Defining an (n+1)-ary superposition operation  $S^n$  on the set  $W_{\tau}(X_n)$  of all n-ary terms of type  $\tau$ , 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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