

ALL MAXIMAL IDEMPOTENT SUBMONOIDS OF
GENERALIZED COHYPERSUBSTITUTIONS
OF TYPE $\tau = (2)$

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Abstract

A generalized cohypersubstitution of type τ is a mapping σ which maps every n_i -ary cooperation symbol f_i to the cotermin $\sigma(f)$ of type $\tau = (n_i)_{i \in I}$. Denote by $Cohyp_G(\tau)$ the set of all generalized cohypersubstitutions of type τ . Define the binary operation \circ_{CG} on $Cohyp_G(\tau)$ by $\sigma_1 \circ_{CG} \sigma_2 := \hat{\sigma}_1 \circ \sigma_2$ for all $\sigma_1, \sigma_2 \in Cohyp_G(\tau)$ and $\sigma_{id}(f_i) := f_i$ for all $i \in I$. Then $\underline{Cohyp_G(\tau)} := \{Cohyp_G(\tau), \circ_{CG}, \sigma_{id}\}$ is a monoid. In [5], the monoid $\underline{Cohyp_G(2)}$ was studied. They characterized and presented the idempotent and regular elements of this monoid. In this present paper, we consider the set of all idempotent elements of the monoid $\underline{Cohyp_G(2)}$ and determine all maximal idempotent submonoids of this monoid.

Keywords: generalized cohypersubstitutions, idempotent submonoids, maximal submonoids.

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