

On mappings of terms determined by hypersubstitutions

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Abstract

In [2] and [3] were studied the kernel of a hypersubstitution of a given type. There were some results which pay attention to these properties in universal algebra. The present paper is a development and extension of this idea. We characterize all hypersubstitutions which are bijections on the set of terms. We introduce the concept of a ρ -solid variety (M - ρ -solid variety) where ρ is a mapping which assigns to each hypersubstitution a mapping on the set of terms. It is a generalization of the concept of a solid variety. We determine all ρ -solid varieties of semigroups for special mappings ρ .