HOMOMORPHISMS AND CONGRUENCES OF MEDIAL SEMIGROUPS WITH AN ASSOCIATE SUBGROUP

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ABSTRACT. Let S be the model of a regular semigroup with an associate subgroup whose identity is a medial idempotent constructed by Blyth and Martins considered as a unary semigroup. For another such semigroup T, we construct all unary homomorphisms of S into T in terms of their parameters. On S we construct all unary congruences again directly from its parameters. This construction leads to a characterization of congruences in terms of kernels and traces. We describe the K, T, L, U and V relations on the lattice of all unary congruences on S, again in terms of parameters of S.

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