The disjunctivity of primitive languages

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Abstract

On a free monoid X^*, a language L is disjunctive if the principal congruence determined by L is identity. We study disjunctive property concerning the primitive languages in this paper. The set of all primitive words is denoted by Q. For any prime number $p \geq 2$, Q can be decomposed into p disjunctive primitive languages in [1] and [7]. In this paper, we determine that whether the primitive languages concerning distinct prime numbers on intersection, union, difference, or catenation operations are disjunctive.

Keywords: *Primitive words, Disjunctive, Prime numbers.*