SOME RESULTS ON ADDITIVE ENDMORPHISMS IN
\((n, 2)\)-SEMIRINGS

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Abstract. In 1993 Tomáš Kepka posed the problem of characterization of nonassociative semirings whose additive endomorphisms are semiring endomorphisms, briefly, called AE-semirings [Kepka T., Semirings whose additive endomorphisms are multiplicative, Comment Math. Univ. Carolinae, 34 (1993), 213-219]. He proved that every idempotent AE-semiring is associative. In this paper, we investigate the \((n, 2)\)-semiring in which every \(n\)-ary additive endomorphism is an \((n, 2)\)-semiring endomorphism. In contrast with the binary case, for \(n \geq 4\), we prove that idempotent AE-\((n, 2)\)-semirings exist, semirings which are not associative.

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References


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