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STUDY OF ADDITIVELY REGULAR Γ-SEMIRINGS AND DERIVATIONS

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Abstract

In this paper, the notions of commutator and derivation in additively regular Γ -semirings with (A_2, Γ) -condition are introduced. We also characterize Jordan product for additively regular Γ -semiring and establish some results which investigate the relationship between commutators, derivations and inner derivations. In 1957, E.C. Posner has shown that if there exists a non-zero centralizing derivation in a prime ring R, then R is commutative. This result is extended in the frame work of derivations of prime additively regular Γ -semirings.

Keywords: semirings, Γ -semirings, additively regular Γ -semirings, derivations and commutators.

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