

IDEALS IN ORDERED Γ -SEMIRINGS

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Abstract

In this paper, we introduce the notion of k -ideal, $m - k$ ideal, prime ideal, maximal ideal, filter, irreducible ideal, strongly irreducible ideal in ordered Γ -semirings, study the properties of ideals in ordered Γ -semirings and the relations between them. We characterize $m - k$ ideals using derivation of ordered Γ -semirings and prove that every ideal in a mono regular ordered Γ -semiring is a prime ideal and field ordered Γ -semiring is simple.

Keywords: ordered Γ -semiring, integral ordered Γ -semiring, regular ordered Γ -semiring, mono ordered Γ -semiring, prime ideal, maximal ideal, k -ideal, $m - k$ ideal, filter, irreducible ideal, strongly irreducible ideal.

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