

## TRI-QUASI IDEALS OF $\Gamma$ -SEMIRINGS

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### Abstract

In this paper, as a further generalization of ideals, we introduce the notion of tri-quasi ideal as a generalization of ideal, left ideal, right ideal, bi-ideal, quasi ideal, interior ideal, bi-interior ideal, weak interior ideal, bi-quasi ideal, tri-ideal, quasi-interior ideal and bi-quasi-interior ideal of  $\Gamma$ -semiring. Some characterizations of  $\Gamma$ -semiring, regular  $\Gamma$ -semiring and simple  $\Gamma$ -semiring using tri-quasi ideals are given and study the properties of tri-quasi ideals of  $\Gamma$ -semiring.

**Keywords:** bi-quasi-interior ideal, bi-interior ideal, bi-quasi ideal, bi-ideal, quasi ideal, interior ideal, regular  $\Gamma$ -semiring, tri-quasi simple  $\Gamma$ -semiring.

**2010 Mathematics Subject Classification:** 16Y60, 06Y99.

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Received 5 May 2019  
Revised 19 March 2020  
Accepted 24 April 2020