

UNI-SOFT QUASI-HYPERIDEALS OF ORDERED SEMIHYPERGROUPS

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Abstract

The main purpose of this article is to study ordered semihypergroups in the context of uni-soft quasi-hyperideals. In this article, using the notion of soft-union sets in ordered semihypergroups, we introduce the concept of union-soft (uni-soft) quasi-hyperideal and the related properties

are investigated. We prove that every uni-soft left (right) hyperideal is a uni-soft quasi-hyperideal but the converse is not true which is shown with help of an example. We present the characterizations of left (right) simple and completely regular ordered semihypergroups in terms of uni-soft quasi-hyperideals. Furthermore we define semiprime uni-soft quasi-hyperideal and characterize completely regular ordered semihypergroup using this notion.

Keywords: uni-soft bi-hyperideal, uni-soft quasi-hyperideal, semiprime uni-soft quasi-hyperideal, left (right) simple, regular and completely regular ordered semihypergroup.

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