

WEAK-HYPERLATTICES DERIVED FROM FUZZY CONGRUENCES

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Abstract

In this paper we explore the connections between fuzzy congruence relations, fuzzy ideals and homomorphisms of hyperlattices. Indeed, we introduce the concept of fuzzy quotient set of hyperlattices as it was done in the case of rings [19]. We prove that a fuzzy congruence induces a fuzzy ideal of the fuzzy quotient hyperlattice. In particular, we establish necessary and sufficient conditions for a zero-fuzzy congruence class to be a fuzzy ideal of a hyperlattice.

Keywords: hyperlattice, ideal, prime ideal, fuzzy ideal, fuzzy prime ideal, fuzzy congruence relation.

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