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FOLDING THEORY OF IMPLICATIVE AND OBSTINATE IDEALS IN BL-ALGEBRAS

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Abstract

In this paper, the concepts of n-fold implicative ideals and n-fold obstinate ideals in BL-algebras are introduced. With respect to this concepts, some related results are given. In particular, it is proved that an ideal is an n-fold implicative ideal if and only if is an n-fold Boolean ideal. Also, it is shown that a BL-algebra is an n-fold integral BL-algebra if and only if trivial ideal $\{0\}$ is an n-fold obstinate ideal. Moreover, the relation between n-fold obstinate ideals and n-fold (integral) obstinate filters in BL-algebras are studied by using the set of complement elements. Finally, it is proved that ideal I of BL-algebra L is an n-fold obstinate ideal if and only if $\frac{L}{I}$ is an n-fold obstinate BL-algebra.

Keywords: BL-algebra, ideal, n-fold implicative ideal, n-fold obstinate ideal.

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