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ON 2-ABSORBING FILTERS OF LATTICES

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Abstract

Let L be a lattice with 1. In this paper we study the concept of 2-absorbing filter which is a generalization of prime filter. A proper filter F of L is called a 2-absorbing filter (resp. a weakly 2-absorbing) if whenever $x_1 \vee x_2 \vee x_3 \in F$ (resp. $1 \neq x_1 \vee x_2 \vee x_3 \in F$), for $x_1, x_2, x_3 \in L$, then there are 2 of the x_i's whose join is in F. A basic number of results concerning 2-absorbing filters and weakly of 2-absorbing filters are given in the case when L is distributive.

Keywords: lattice, filter, 2-absorbing filter, weakly 2-absorbing filter.

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