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Principal congruences on semi-De Morgan algebras. (English) Zbl 0981.06007
Stud. Log. 67, No. 1, 75-88 (2001).

A semi-De Morgan algebra is an algebra $(L, \wedge, \vee, ', 0, 1)$ of type $(2, 2, 1, 0, 0)$ such that $(L, \wedge, \vee, 0, 1)$ is a bounded distributive lattice and the following identities are satisfied:

$$0' = 1, \quad 1' = 0, \quad (x \vee y)' = x' \wedge y', \quad (x \wedge y)'' = x'' \wedge y'', \quad x''' = x'.$$

The authors characterize those semi-De Morgan algebras which have only principal congruences (Theorem 3.14). In particular all such algebras are finite. The paper extends some of the results obtained by *R. Beazer* [*Port. Math.* 50, 75-86 (1993; [Zbl 0801.06023](#))].

Reviewer: [V.N.Salij \(Saratov\)](#)

MSC:

[06D30](#) De Morgan algebras, Łukasiewicz algebras (lattice-theoretic aspects)
[08A30](#) Subalgebras, congruence relations
[06D15](#) Pseudocomplemented lattices

Cited in 1 Document

Keywords:

[pseudocomplementation](#); [semi-De Morgan algebra](#); [principal congruences](#)

Full Text: [DOI](#)