On congruences of algebras defined on sectionally pseudocomplemented lattices

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Abstract: On any sectionally pseudocomplemented lattice can be defined a binary operation \circ similar to the relative pseudocomplementation. It is also known that any finite sublattice L of a free lattice is sectionally pseudocomplemented. The congruence lattices and the congruence classes of the corresponding algebras (L, \wedge, \vee, \circ) are described. We prove that the finite sublattices of a free lattice are directly indecomposable with the exception of some very particular cases.