

On subdirectly irreducible members of double Boolean algebras

Temgoua Alomo Etienne Romuald, Kwuida Leonard, Tenkeu Kembang Gaël
University of Yaounde 1
University of Bern
University of Yaounde 1
retemgoua@gmail.com

Double Boolean algebras are algebras $\underline{D} = (D; \sqcup, \sqcap, \neg, \lrcorner, \perp, \top)$ of type $(2, 2, 1, 1, 0, 0)$ introduced by Rudolf Wille to capture the equational theory of the algebra of protoconcepts. Every double Boolean algebra \underline{D} contains two Boolean algebras denoted \underline{D}_{\sqcap} and \underline{D}_{\sqcup} . A double Boolean algebra \underline{D} is said to be pure if $D = D_{\sqcap} \cup D_{\sqcup}$ and trivial if $\perp \sqcup \perp = \top \sqcap \top$. In this work, we look at the subdirectly irreducible algebras of the variety of double Boolean algebras.

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