

Operators **Max** L and **Min** U and duals of Boolean posets

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When working with posets which are not necessarily lattices, one has a lack of lattice operations which causes problems in algebraic constructions. This is the reason why we use the operators **Max** L and **Min** U substituting infimum and supremum, respectively. We axiomatize these operators. Two more operators, namely the so-called symmetric difference and the Sheffer operator, are introduced and studied in complemented posets by using the operators **Max** L and **Min** U . In Boolean algebras, the symmetric difference is used to construct its dual structure, the corresponding unitary Boolean ring. By generalizing this idea, we assign to each Boolean poset a so-called dual and prove that also, conversely, a Boolean poset can be derived from its dual.