Larmerová, Jana; **Rachůnek, Jiří**
Translations of distributive and modular ordered sets. (English) | Zbl 0693.06003 |
Acta Univ. Palacki. Olomuc., Fac. Rerum Nat. 91, Math. 27, 13-23 (1988).

The authors define distributive and modular posets in a manner that generalizes the corresponding notions from lattice theory. Both notions turn out to be selfdual, and it is shown that every distributive poset is modular. For a poset P, let U(A), L(A) denote the set of upper, lower bounds of the subset A of P. Distributivity is defined by the requirement that $L(U(a,b),c) = L(U(L(a,c), L(b,c)))$, and modularity by $U(L(a,b),c) = U(L(U(a,c), U(b,c)))$ whenever $a \leq c$. The mapping f on P is called a lower homomorphism if $U(f(L(a,b))) = U(L(f(a), f(b)))$ for all a, b in P, and it is called a translation if $f(U(a,b)) = U(f(a), b)$. The connection between lower homomorphisms and translations is explored when P is a distributive or modular poset. It is also established that when P is a lattice, then lower homomorphisms coincide with meet homomorphisms.

Reviewer: M.F.Janowitz

MSC:

06A06	Partial orders, general
06A15	Galois correspondences, closure operators (in relation to ordered sets)

Cited in **4** Reviews
Cited in **22** Documents

Keywords:

modular posets; distributive poset; lower homomorphism; translation

Full Text: EuDML

References:

[1] Rachůnek J.: Translations des ensembles ordonnés. Math. Slovaca 31 (1981), 337-340. · Zbl 0472.06002 · eudml:34111

[2] Szàsz G.: Translationen der Verbände. Acta Univ. Comen., Math., 5 (1961), 449-453. · Zbl 0112.01901

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.