

**Medvedev, N. Ya.**

**On the lattice of approximable  $\ell$ -varieties.** (Russian) Zbl 0551.06017  
Czech. Math. J. 34(109), 6-17 (1984).

An  $\ell$ -variety satisfying  $(x \wedge y^{-1} x^{-1} y) \vee e = e$  is called  $\mathfrak{o}$ -approximable. The author shows that the lattice  $L_{\mathfrak{o}}$  of all  $\mathfrak{o}$ -approximable  $\ell$ -varieties has not the covering property (namely, he constructs a variety  $V \in L_{\mathfrak{o}}$  which is not the greatest element of  $L_{\mathfrak{o}}$  and has no cover in  $L_{\mathfrak{o}}$ ). Further, he proves that  $L_{\mathfrak{o}}$  is not a Brouwer lattice and finds the base ranks (minimal number of generators of  $\ell$ -groups generating the given variety) for  $\ell$ -varieties given by  $(x \wedge y^{-1} x^{-1} y) \vee e = e$  and by  $|x||y| \wedge |y|^2|x|^2 = |x||y|$ ; they are 2 in both cases. Finally, he constructs an  $\ell$ -variety having no independent equational base.

Reviewer: V.Novák

**MSC:**

06F15 Ordered groups  
08B15 Lattices of varieties  
06B20 Varieties of lattices

Cited in **2** Reviews  
Cited in **5** Documents

**Keywords:**

$\mathfrak{o}$ -approximable  $\ell$ -varieties; covering property; base ranks

**Full Text:** [EuDML](#)