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VARIETIES GENERATED BY MODULAR LATTICES OF WIDTH FOUR

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The purpose of this paper is to announce some results of the author's thesis on modular width four lattices and their consequences particularly in the field of lattice varieties. Detailed proofs will appear elsewhere.

A variety (equational class) of lattices is said to be *finitely based* if it is defined by a finite set of identities (see [2] for definitions). Let M_n^m be the variety generated by all modular lattices of width not exceeding n and length not exceeding m, where m and n are cardinals. It is easy to see that if n_1 and n_2 are infinite cardinals and m is any cardinal then $M_m^{n_1} = M_m^{n_2}$ and $M_{n_1}^m = M_{n_2}^m$. Consequently the symbol ∞ will be used in place of any infinite cardinal. R. Wille [8] asks for which m, n is M_n^m finitely based. If m

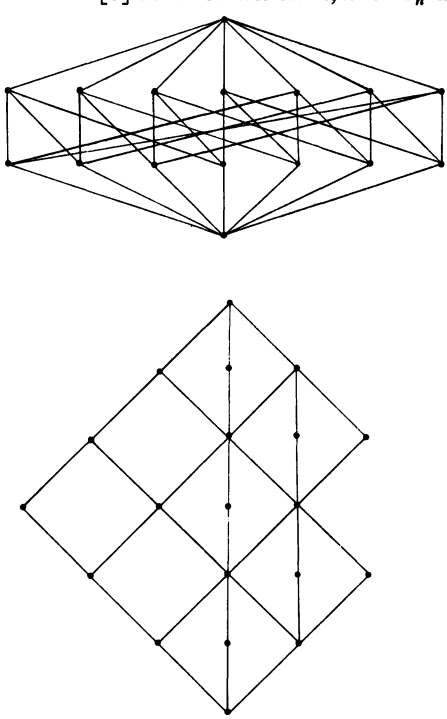

FIGURE 1

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