YET TWO ADDITIONAL LARGE NUMBERS OF SUBUNIVERSES OF FINITE LATTICES

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Abstract

By a subuniverse, we mean a sublattice or the emptyset. We prove that the fourth largest number of subuniverses of an n -element lattice is $43 \cdot 2^{n-6}$ for $n \geq 6$, and the fifth largest number of subuniverses of an n -element lattice is $85 \cdot 2^{n-7}$ for $n \geq 7$. Also, we describe the n -element lattices with exactly $43 \cdot 2^{n-6}$ (for $n \geq 6$) and $85 \cdot 2^{n-7}$ (for $n \geq 7$) subuniverses.

Keywords: finite lattice, sublattice, number of sublattices, subuniverse.

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