

ON A SEMILATTICE OF NUMBERINGS

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We study some properties of a \mathfrak{c} -universal semilattice \mathfrak{A} with the cardinality of the continuum, i.e., of an upper semilattice of m -degrees. In particular, it is shown that the quotient semilattice of such a semilattice modulo any countable ideal will be also \mathfrak{c} -universal. In addition, there exists an isomorphism $\iota : \mathfrak{A} \hookrightarrow \mathfrak{A}$ onto some ideal of the semilattice \mathfrak{A} such that $\mathfrak{A}/\iota(\mathfrak{A})$ will be also \mathfrak{c} -universal. Furthermore, a property of the group of its automorphisms is obtained. To study properties of this semilattice, the technique and methods of admissible sets are used. More exactly, it is shown that the semilattice of $m\Sigma$ -degrees $L_{m\Sigma}^{\mathbb{H}\mathbb{F}(S)}$ on the hereditarily finite superstructure $\mathbb{H}\mathbb{F}(S)$ over a countable set S will be a \mathfrak{c} -universal semilattice with the cardinality of the continuum.

Key words and phrases: computably enumerable set, admissible set, \mathbb{A} -numbering, $m\Sigma$ -reducibility, hereditarily finite superstructure, natural ordinal, upper semilattice, a \mathfrak{c} -universal semilattice.

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Received

October 16, 2008

Translated into English:

Siberian Advances in Mathematics, V. 20, N 2, 128–154 (2010).