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Retracts and Q-independence. (English) Zbl 1131.08003

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Summary: A non-empty set X of a carrier A of an algebra $\mathbf{A}$ is called Q-independent if the equality of two term functions f and g of the algebra $\mathbf{A}$ on any finite system of elements $a_1, a_2, \ldots, a_n$ of X implies $f(p(a_1), p(a_2), \ldots, p(a_n)) = g(p(a_1), p(a_2), \ldots, p(a_n))$ for any mapping $p \in Q$. An algebra $\mathbf{B}$ is a retract of $\mathbf{A}$ if $\mathbf{B}$ is the image of a retraction (i.e. of an idempotent endomorphism of $\mathbf{B}$). We investigate Q-independent subsets of algebras which have a retraction in their set of term functions.

MSC:

08B20 Free algebras
08A40 Operations and polynomials in algebraic structures, primal algebras
06D15 Pseudocomplemented lattices

Keywords:

term function; Q-independence; retraction; Stone algebra; skeleton; Glivenko congruence

Full Text: DOI