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RETRACTS AND Q-INDEPENDENCE

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Dedicated to the memory of Professor Kazimierz Głazek

Abstract

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.

Keywords: general algebra, term function, Q-independence, M, I, S, S_0, A_1, G-independence, t-independence, retraction, retract, Stone algebra, skeleton and set of dense element of Stone algebra, Glivenko congruence.

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