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SOME PROPERTIES OF t-DERIVATIONS IN INCLINE ALGEBRAS

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Abstract. In this paper, we have attempted a study of the concept of t-derivations in incline algebra which extends the concept of derivations in classical algebraic structures to incline algebras and explore their fundamental properties. We have proved that the composition of two t-derivations is a derivation. We have also proved that if t is idempotent then d_t is also idempotent, moreover if K is commutative then d_t is endomorphism on K. In this study, we investigate the influence of element properties in commutative incline algebras on t-derivations. Notably, we show that if x is the inverse of y in a commutative incline K with unity then $d_t(x)$ is the inverse of $d_t(y)$ if and only if t is a self inverse in K.

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