Research Article (6)

Mahmoud M. El-Soufi and A. Ghreeb, *Centrally-extended α-homoderivations on prime and semiprime rings,* Journal of Mathematics Volume 2022, Article ID 2584177, 5 pages.

Abstract

We present a new type of mappings called centrally extended α- homoderivations of a ring R (i.e., a map H from R into R which satisfies $H(x + y) - H(x) - H(y) \in Z(R)$ and $H(xy) - H(x)H(y) - H(x)\alpha(y) - \alpha(x)H(y) \in Z(R)$ for any $x, y \in R$) where α is a mapping of R and discuss the relationship between these mappings and other related mappings. Also, we study their effect on the center of a ring, and we give several outcomes on the commutativity of the ring.