Research Article (1)

Mahmoud El-soufi, Ahmed Aboubakr, *Generalized derivations on Jordan ideals in prime rings*, Turk J Math 38 (2014), 233 – 239.

Abstract

Let R be a 2-torsion free prime ring with center $Z(R)$, J be a nonzero Jordan ideal also a subring of R, and F be a generalized derivation with associated derivation d. In the present paper, we shall show that $J \subseteq Z(R)$ if any one of the following properties holds: (i) $[F(u), u] \in Z(R)$, (ii) $F(u)u = ud(u)$, (iii) $d(u^2) = 2F(u)u$, (iv) $F(u^2) - 2uF(u) = d(u^2) - 2ud(u)$, (v) $F^2(u) + 3d^2(u) = 2Fd(u) + 2dF(u)$, (vi) $F(u^2) = 2uF(u)$ for all $u \in J$.