

On (α, β) -derivations in BCI -algebras

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Abstract

The notion of (regular) (α, β) -derivations of a BCI -algebra X is introduced, some useful examples are discussed, and related properties are investigated. Condition for a (α, β) -derivation to be regular is provided. The concepts of a $d_{(\alpha, \beta)}$ -invariant (α, β) -derivation and α -ideal are introduced, and their relations are discussed. Finally, some results on regular (α, β) -derivations are obtained.

References

- [1] H.A.S. Abujabal and N.O. Al-Shehri, *On Left Derivations of BCI -algebras*, Soochow J. Math. **33(3)** (2007), 435–444.
 - [2] M. Aslam and A.B. Thaheem : *A note on p -semisimple BCI -algebras*, Math. Japon. **36** (1991), 39-45.
 - [3] N. Aydin and A. Kaya: *Some generalization in prime rings with (σ, τ) -derivation*, Doga Turk. J. Math. **16** (1992), 169-176.
 - [4] G. Mudiuddin and A. M. Al-roqi, *On t-derivations of BCI -algebras*, Abstract and Applied Analysis, (In Press) (2012).
 - [5] M. A. Ozturk, Y. Ceven and Y. B. Jun : *Generalized Derivations of BCI -algebras*, Honam Math. J. **31** (4) (2009), 601-609.
 - [6] J. Zhan and Y. L. Liu, *On f -derivations of BCI -algebras*, Int. J. Math. Math. Sci. **2005(11)** (2005), 1675–1684.
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