

Aleš Drápal

Moufang loops of order coprime to three that cyclically extend groups of dihedral type

Comment.Math.Univ.Carolin. 57,4 (2016) 453–500.

Abstract: This paper completely solves the isomorphism problem for Moufang loops $Q = GC$ where $G \trianglelefteq Q$ is a noncommutative group with cyclic subgroup of index two and $|Z(G)| \leq 2$, C is cyclic, $G \cap C = 1$, and Q is finite of order coprime to three.

Keywords: dihedral group; Moufang loop; cyclic extension; semidirect product

AMS Subject Classification: 20N05

REFERENCES

- [1] Chein O., *Moufang loops of small order, I.*, Trans. Amer. Math. Soc. **188** (1974), 31–51.
- [2] Chein O., *Moufang loops of small order*, Mem. Amer. Math. Soc. **13** (1978), no. 197.
- [3] Drápal A., *On extensions of Moufang loops by a cyclic factor that is coprime to three*, Comm. Algebra, (in print) <http://dx.doi.org/10.1080/00927872.2016.1233202>.
- [4] Gagola S.M., III, *Cyclic extensions of Moufang loops induced by semi-automorphisms*, J. Algebra Appl. **13** (2014), no. 4, Article ID 1350128.
- [5] Gagola S.h.M., III, *Describing cyclic extensions of Bol loops*, Quasigroups and Related Systems **23** (2015), 31–39.
- [6] Goodaire E.R., May S., Raman M., *The Moufang Loops of Order Less Than 64*, Nova Science Publishers, Inc., Commack, NY, 1999.