



ON BOL LOOP AND ITS PARASTROPHS

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Abstract

Given a quasigroup (B, \cdot) , in [Hala O. Pflugfelder, Quasigroups and loops: introduction, Sigma Series in Pure Mathematics, 7, Heldermann Verlag, Berlin, 1990] Pflugfelder showed that there are five associated quasigroups which are called parastrophs. In this paper, we show that if (B, \cdot) is a Bol loop and it satisfies the automorphic inverse property (AIP) $(xy)^{-1} = x^{-1}, y^{-1}$ then two of the five parastrophs are also Bol loops. If in addition to the above, the Bol loop is commutative, then all the five parastrophs are also Bol loops.

Keywords and phrases: loops, Bol loops, parastrophs, quasigroup.