

On the Loop Cloud of a Group

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Informally, a quasigroup with identity, briefly – a loop, is a group without the axiom of associativity. In 1939, Reinhold Baer showed how to obtain a loop as a “factor loop” of a group. In this paper, using Baer’s result, I will define the Loop Cloud and prove properties of the Loop Cloud of G and G . For example, G is a simple group if and only if the loops in the loop cloud of are not groups.

Keywords group, quasigroup with identity, simple groups, coset quasigroups with identity