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loop and quasigroup

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A *quasigroup* is a groupoid G with the property that for every $x, y \in G$, there are unique elements $w, z \in G$ such that $xw = y$ and $zx = y$.

A *loop* is a *quasigroup* which has an identity element.

What distinguishes a loop from a group is that the former need not satisfy the associative law.