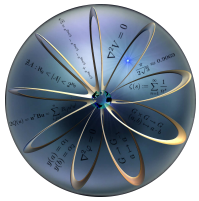

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medial quasigroup

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A *medial quasigroup* is a quasigroup such that, for any choice of four elements a, b, c, d, one has

$$(a \cdot b) \cdot (c \cdot d) = (a \cdot c) \cdot (b \cdot d).$$

Any commutative quasigroup is trivially a medial quasigroup. A non-trivial class of examples may be constructed as follows. Take a commutative group $(G, +)$ and two automorphisms $f, g \colon G \to G$ which commute with each other, and an element c of G. Then, if we define an operation $\cdot \colon G \times G \to G$ as

$$x \cdot y = f(a) + g(b) + c,$$

$(G, \cdot)$ is a medial quasigroup.

Reference:

V. D. Belousov, Fundamentals of the theory of quasigroups and loops (in Russian)