n-Groups derivable from groups

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ABSTRACT.

The trivial extentions of binary operation $*$ to the n-ary operation φ has the form $\varphi(x_1, x_2, \ldots, x_n) = x_1 * x_2 * \cdots * x_n * a$. If $(G, *)$ is a group and $a \in Z(G, *)$ the center of $(G, *)$ then (G, φ) is an n-group so called n-group derived from $(G, *)$. It is known that there exist n-groups (G, φ) which cannot be obtained as a derived group. The goal of the paper is to characterize all the n-groups operations which are derivable from group operations.

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