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On the structure of finite loop capable nilpotent groups

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Abstract: In this paper we consider finite loops and discuss the problem which nilpotent groups are isomorphic to the inner mapping group of a loop. We recall some earlier results and by using connected transversals we transform the problem into a group theoretical one. We will get some new answers as we show that a nilpotent group having either $C_{p^k} \times C_{p^l}$, $k > l \geq 0$ as the Sylow p -subgroup for some odd prime p or the group of quaternions as the Sylow 2-subgroup may not be loop capable.

Keywords: loop, group, connected transversals

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