

Are Commutants in Moufang Loops Normal?

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$$(((C * x) * y) * (y' * x')) * z = z * (((C * x) * y) * (y' * x'))$$

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Curious Fact: There is no known equational proof of this (relatively) uncomplicated theorem. There should be one. And Prover9 should be able to find it.

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If you can't show that D is in the commutant, instead, show that D has many (some?) commutant-like properties; e.g., D^3 is nuclear (and piles and Piles and PILES of others).

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Theorem. (No assumptions on A , B , or C). (i) D commutes with cubes. (ii) If D commutes with E , and if D commutes with F , then D commutes with $E * F$ (so if L is generated by cubes, then D is in the commutant).