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C-Supplemented Subalgebras of Lie Algebras

A subalgebra B of a Lie algebra L is *c-supplemented* in L if there is a subalgebra C of L with $L = B + C$ and $B \cap C \leq B_L$, where B_L is the core of B in L . This is analogous to the corresponding concept of a c-supplemented subgroup in a finite group. We say that L is *c-supplemented* if every subalgebra of L is c-supplemented in L . We give here a complete characterisation of c-supplemented Lie algebras over a general field.

Keywords: Lie algebras, c-supplemented subalgebras, completely factorisable algebras, Frattini ideal, subalgebras of codimension one.

MSC: 17B05, 17B20, 17B30, 17B50