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Levi's theorem

Canonical name	LevisTheorem
Date of creation	2013-03-22 13:51:15
Last modified on	2013-03-22 13:51:15
Owner	bwebste (988)
Last modified by	bwebste (988)
Numerical id	5
Author	bwebste (988)
Entry type	Theorem
Classification	msc 17B05

Let \mathfrak{g} be a complex Lie algebra, \mathfrak{r} its radical. Then the extension $0 \rightarrow \mathfrak{r} \rightarrow \mathfrak{g} \rightarrow \mathfrak{g}/\mathfrak{r} \rightarrow 0$ is split, i.e., there exists a subalgebra \mathfrak{h} of \mathfrak{g} mapping isomorphically to $\mathfrak{g}/\mathfrak{r}$ under the natural projection.