DERIVATIONS AND INVARIANT FORMS
OF LIE ALGEBRAS GRADED BY FINITE ROOT SYSTEMS

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Abstract. Lie algebras graded by finite reduced root systems have been classified up to isomorphism. In this paper we describe the derivation algebras of these Lie algebras and determine when they possess invariant bilinear forms. The results which we develop to do this are much more general and apply to Lie algebras that are completely reducible with respect to the adjoint action of a finite-dimensional subalgebra.

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