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Automorphisms of simple Lie algebras G(n) over GF(2).

Kaplansky introduced infinite family of simple Lie algebras G(n) over GF(2) in 1982, and Lin described G(n) as the grading form. We define the combinatorial basis of G(n), then Aut(G(4)) is computed and Aut(G(n)) = (Z/2Z) X Sn for all n > 4 by the combinatorial basis. (Received November 23, 2011)