

1075-17-159

Young Jo Kwak* (kwaky@colorado.edu), 491 Geneva Street D114, Aurora, CO 80010.

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 $\text{Aut}(G(4))$ is computed and $\text{Aut}(G(n)) = (\mathbb{Z}/2\mathbb{Z}) \times S_n$ for all $n > 4$ by the combinatorial basis. (Received August 28, 2011)