STRONGLY GRADED RINGS WHICH ARE MAXIMAL ORDERS

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Abstract.

Let $R = \oplus_{n \in \mathbb{Z}} R_n$ be a strongly graded ring of type $\mathbb{Z}$. In [6], it is shown that if R_0 is a maximal order, then so is R. We define a concept of $\mathbb{Z}$-invariant maximal order and show R_0 is a $\mathbb{Z}$-invariant maximal order if and only if R is a maximal order. We provide examples of R_0 which are $\mathbb{Z}$-invariant maximal orders but not maximal orders.