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On group rings with restricted minimum condition

Let R be an associative ring with unit element. R is said to satisfy the left restricted minimum condition, if for each nontrivial ideal J of R the ring R/J is left artinian. In this paper we consider the group rings with left restricted minimum condition, in the case when RG itself is not left artinian.

We prove the following

Theorem. Let G be a group with non-trivial center and let R be a commutative ring with unit element. If the group ring RG satisfies the left restricted minimum condition, then R is left artinian and either G is finite, or G is the infinite cyclic group.

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