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Groups and Simple Rings.*

For a group $(G, +)$ with identity 0, we let $C = \{A_1, \dots, A_n\}$ be a cover by abelian subgroups. Further, let $R(C) = \{f : G \rightarrow G \mid f|_{A_i} \in \text{End}(G) \text{ for all } i = 1, \dots, n\}$. Under pointwise addition and function composition, $R(C)$ forms a ring. We will give conditions on G and C under which $R(C)$ will be a simple ring. (Received September 21, 2010)