Pavel Příhoda Bases of minimal elements of some partially ordered free abelian groups

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Abstract: In the present paper, we will show that the set of minimal elements of a full affine semigroup $A \hookrightarrow \mathbb{N}_0^k$ contains a free basis of the group generated by A in \mathbb{Z}^k . This will be applied to the study of the group $K_0(R)$ for a semilocal ring R.

Keywords: full affine semigroups, partially ordered abelian groups, semilocal

rings, direct sum decompositions

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