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classes of modules.*

Given a finitely generated module M over a local ring R , one can form the monoid $+(M)$ of isomorphism classes of finitely generated modules that are direct summands of direct sums of copies of M . It is known that $+(M)$ is always a *positive normal* monoid, that is, it is isomorphic to $\mathbb{N}^t \cap L$ for some positive integer t and some \mathbb{Q} -subspace L of \mathbb{Q}^t . (Here \mathbb{N} is the monoid of non-negative integers.) Conversely, every positive normal monoid arises in this fashion; in fact, the ring R can always be chosen to be a one-dimensional local domain. We will outline the proof of this fact and indicate what properties the ring R needs to have in order to represent a given monoid. (Received September 25, 2000)