

عنوان مقاله:

GRADED I-PRIME SUBMODULES

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خلاصه مقاله:

Let $R = \bigoplus_{g \in G} R_g$ be a G -graded commutative ring with identity, I be a graded ideal and let M a G -graded unitary R -module, where G is a semigroup with identity e . We introduce graded I -prime ideals (submodules) as a generalizations of the classical notions of prime ideals (submodules). We show that the new notions inherit the basic properties of the classical ones. In particular, we investigate the localization theory of these two concepts. We prove that for a faithful flat module F , a graded submodule P of M is I -prime if and only if $F \otimes P$ is graded I -prime submodule of $F \otimes M$. As an application, for finitely generated graded module M over Noetherian graded ring R , the completion of graded I -prime submodules is I -prime submodule.

کلمات کلیدی:

I -prime ideals, I -prime submodule, graded prime ideal, graded prime submodule

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