

On projective covers of semimodules and perfect semirings

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Abstract

We consider two natural concepts of perfectness in a semiring context: the perfectness in terms of projective covers, and the perfectness in Bass's sense. For both cases we show that the class of right (left) perfect semirings coincides with the class of right (left) perfect rings; in particular, we completely confirm Conjecture of [Y. Katsov, Toward homological classification of semirings: Serre's conjecture and Bass's perfectness in a semiring context. Algebra Universalis 52 (2004) 197-214]. © 2014 World Scientific Publishing Company.

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Keywords

flat semimodule, perfect (semi)ring, Projective cover