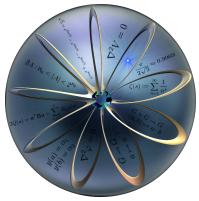

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perfect and semiperfect rings

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A ring R is called **left/right perfect** if for any left/right R-module M there exists a projective cover $p : P \to M$.

A ring R is called **left/right semiperfect** if for any left/right finitely-generated R-module M there exists a projective cover $p : P \to M$.

It can be shown that there are rings which are left perfect, but not right perfect. However being semiperfect is left-right symmetric property.

Some examples of semiperfect rings include:

1. perfect rings;
2. left/right Artinian rings;
3. finite-dimensional algebras over a field k.