International Electronic Journal of Algebra
Volume 8 (2010) 219-220

CORRIGENDUM TO "GENERALIZED COFINITELY SEMIPERFECT MODULES"

[International Electronic Journal of Algebra, 5 (2009) 58-69]

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All rings R are associative with unity and all R-modules M are unital right R-modules. A submodule N of a module M is called *cofinite* if M/N is finitely generated. A module M is called *generalized (amply) cofinitely supplemented* if every cofinite submodule of M has (ample) generalized supplements in M and denoted by gcs (gacs)-module, respectively.

Theorem 3.5.([1]) *Let M be a gcs-module and let A be a cofinite submodule of M. If A is a generalized supplement in M, then $Rad(A) = A$.*

Theorem 3.5 above is false. Let M be a simple module. Clearly, M is a gcs-module and a cofinite submodule of M. Moreover, M is a generalized supplement of the zero submodule in M. But $\mathrm{Rad}(M) = 0$.

Theorem 3.8 ([1]) *Let R be a ring and M be a right R-module. Then the following statements are equivalent:*
(1) M is gcs-module.
(2) Every maximal submodule of M has a generalized supplement in M.
(3) The module $M/Loc(M)$ does not contain a maximal submodule.
(4) The module $M/g-Cof(M)$ does not contain a maximal submodule.

Theorem 3.8 (3) must be deleted. The equivalence (1) $\Leftrightarrow$ (3) implies that, a finitely generated module M is a gcs-module if and only if M is a (finite) sum of local modules. Then M is supplemented by [3, 41.6]. This is a contradiction, because there exists finitely generated gcs-modules that are not supplemented (see, [2, Sec. 2]).

Acknowledgment. I would like to thank Abdullah Harmancı and Engin Büyükaşık for pointing out the errors.

References

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