Abstract

All rings have identity elements and all modules are unital right modules, unless stated otherwise. Let R be a ring and let M be an R-module.

This research consists of two sections. In section one we introduce and recall some basic definitions and propositions which is useful to our studies. In section Two an essential submodule has been studied with some of its properties which is necessary to our research.

In section three, the socle of a module M defined where the socle of M is the largest submodule of M generated by simple modules, or equivalently, it is the largest semi-simple submodule of M. The socle of M can also be defined as the intersection of all the essential submodules of M, so the socle is the largest semi-simple submodule. Hence in this section some examples and properties of the socle of a module in addition to its definition offered.