

Absorbing ideal structures of commutative rings

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Abstract

Let R be a commutative ring with nonzero identity. As generalizations of prime ideals, the absorbing ideals was first defined and studied by A. Badawi in 2007. A proper ideal I of R is said to be 2-absorbing if whenever $a, b, c \in R$ with $abc \in I$, then either $ab \in I$ or $ac \in I$ or $bc \in I$. After this date, many researches have been done to introduce various extensions of this concept.

In this talk, we present some absorbing ideals of this class of ideals in general aspect with a number of examples, and also we give many characterizations for some particular rings such as quasi-local rings, Dedekind domains, fields in terms of absorbing ideals.