

ABSTRACT

r-CLEAN SEMIRINGS

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Let $(S, +, \cdot)$ be a semiring over addition and multiplication operation. For any non-zero x in S , x is a clean element if x is a sum of unit and idempotent element. Thus, as a generalization of clean ring, S is called a clean semiring if any non-zero x in S is a clean element. Furthermore, a regular element can be found in a semiring. From the existence of regular elements on semiring is a generalization of clean semiring. On this thesis, the definition of an r -clean semiring is studied. It also discusses the properties that apply to the clean semiring. Through this thesis, the relationship of the r -clean semiring with clean ring, r -clean ring, and clean semiring which is the structure that motivates the existence of the r -clean semiring is also studied.

Keywords: regular elements, r -clean semirings, clean semirings, r -clean rings.