KARAKTERISTIK DARI B_1 NEAR-RING DAN S_1 NEAR-RING

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SEMARANG

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Skripsi

Diajukan sebagai syarat untuk memperoleh gelar Sarjana Sains

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ABSTRAK

Himpunan tak kosong N dengan dua operasi biner penjumlahan dan perkalian disebut near-ring asalkan N terhadap operasi penjumlahan merupakan grup, N terhadap operasi perkalian merupakan semigrup dan terhadap operasi perkalian dan penjumlahan memenuhi salah satu sifat distributif. Near-ring $(N, +, \bullet)$ disebut S_1 near-ring asalkan untuk setiap $a \in N$, $axa = xa$, untuk suatu $x \in N^*$. Near-ring $(N, +, \bullet)$ disebut S_1 near-ring kuat asalkan untuk setiap $a \in N$, $axa = xa$, untuk setiap $x \in N^*$. Near-ring N disebut Boolean near-ring asalkan untuk setiap $a \in N$, $N(aa) = Na$. Near-ring N disebut B_1 near-ring asalkan untuk setiap $a \in N$, terdapat $x \in N^*$ sehingga $Nxa = Nax$. Near-ring N disebut B_1 near-ring kuat asalkan untuk setiap $a, b \in N$, $Nba = Nab$. Dalam skripsi ini dibahas tentang keterkaitan antara S_1 near-ring kuat dan B_1 near-ring, Boolean near-ring dan B_1 near-ring serta B_1 near-ring dan B_1 near-ring kuat.

Kata kunci: S_1 near-ring, S_1 near-ring kuat, Boolean near-ring, B_1 near-ring, B_1 near-ring kuat

ABSTRACT

Let N be a non empty set with two binary operations additive and multiplicative is called near-ring if N over additive operation is group (not necessarily abelian), N over multiplicative operation is semigroup, and N over both binary operation satisfies right(left) distributive law. Near-ring $(N,+,\bullet)$ is called S_1 near-ring if for every $a \in N$, there exist $x \in N^*$, $axa = xa$. Near-ring $(N,+,\bullet)$ is called strong S_1 near-ring if for every $a \in N$, $axa = xa$, for every $x \in N^*$. Near-ring N is called Boolean near-ring if for every $a \in N$, $N(aa) = Na$. Near-ring N is called B_1 near-ring if for every $a \in N$, there exist $x \in N^*$, $Nxa = Nax$. Near-ring N is called strong B_1 near-ring if for every $a, b \in N$, $Nba = Nab$. In this undergraduated thesis we discussed some of their properties, obtain a characterisation and also a structure theorem beetwen strong S_1 near-ring and B_1 near-ring, Boolean near-ring and B_1 near-ring, B_1 near-ring and strong B_1 near-ring.

Keywords: S_1 near-ring, strong S_1 near-ring, Boolean near-ring, B_1 near-ring, strong B_1 near-ring