



## INTISARI

### KONSEP IDEMPOTEN, BAND, DAN RELASI GREEN PADA SEMIGRUP TERNIER

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Semigrup ternier merupakan generalisasi dari semigrup biner. Himpunan tak kosong  $S$  disebut semigrup ternier  $S$  jika dilengkapi operasi ternier  $\circ : S \times S \times S \rightarrow S$  yang memenuhi  $\circ(a, b, c) = a \circ b \circ c$ . Dalam tulisan ini, difokuskan pada sifat-sifat semigrup ternier  $S$  dan hubungan-hubungan diantara semigrup ternier  $S$ , elemen regular, elemen idempoten dan elemen invers dengan membandingkan sifat-sifat pada semigrup biner. Selanjutnya, dapat didefinisikan pula relasi Green pada semigrup ternier  $S$  yang dikonstruksi berdasarkan relasi Green pada semigrup biner. Relasi Green pada semigrup biner analog dengan relasi Green pada semigrup ternier.



## ABSTRACT

### THE CONCEPT OF IDEMPOTENT, BANDS AND GREEN'S RELATIONS IN TERNARY SEMIGROUPS

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Ternary semigroup is a generalization of binary semigroup. The nonempty set  $S$  is called ternary semigroup  $S$  if it is equipped with ternary operation  $\circ : S \times S \times S \rightarrow S$  that fulfill  $\circ(a, b, c) = a \circ b \circ c$ . In this thesis, we focus on the properties of ternary semigroup  $S$  and the relations between ternary semigroup  $S$ , the regular element, the idempotent element and the inverse element by comparing the properties of the binary semigroup. Furthermore, we can also define Green's relations in ternary semigroup  $S$  constructed based by Green relation on binary semigroup. Green relation on binary semigroup analog with Green relation on ternary semigroup.