

## INTISARI

### INTEGRAL-C

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Dalam tesis ini dibahas mengenai suatu integral yang mengintegralkan semua fungsi terintegral Lebesgue dan derivatif dari suatu fungsi terdiferensial. Integral tersebut dikenal sebagai integral-C. Selanjutnya, dibahas sifat-sifat fungsi terintegral-C. Primitif fungsi integral-C dapat didekomposisi menjadi jumlahan fungsi terintegral Lebesgue dan derivatif dari suatu fungsi terdiferensial. Himpunan semua primitif fungsi integral-C dinotasikan dengan himpunan  $\langle AC, \Delta \rangle$ . Selanjutnya, dibahas karakteristik primitif fungsi terintegral-C. Setiap fungsi terintegral Lebesgue merupakan fungsi terintegral-C.

Kata kunci: integral-C, himpunan  $\langle AC, \Delta \rangle$ , himpunan  $AC$ , integral Lebesgue.

## ABSTRACT

### THE C-INTEGRAL

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In this thesis, we discuss an integral that integrates all Lebesgue integrable functions and the derivatives of a differentiable function. The integral is known as the C-integral. Then, we discuss the properties of C-integrable function. The primitive of C-integrable function can be decomposed into a sum of a Lebesgue integrable function and a derivative of a differentiable function. The set of all primitive for the C-integral is denoted by  $\langle AC, \Delta \rangle$ . Then, we discuss the primitive characteristics of C-integrable functions. Every Lebesgue integrable function is C-integrable function.

Keywords: the C-integral, the set of  $\langle AC, \Delta \rangle$ , the set of  $AC$ , the Lebesgue integral.