

INTEGRAL KOMPLEKS

Oleh : Danang Mursita

Matematika untuk Perguruan Tinggi - http://www.biobses.com/judul-buku,300-matematika_untuk_perguruan_tinggi.html

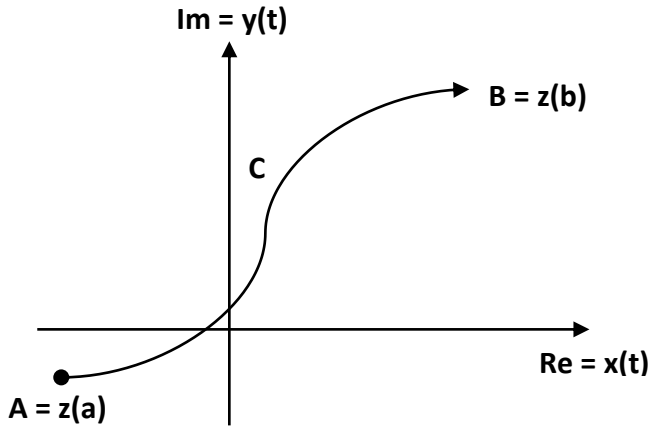
Materi yang dibahas pada bab ini adalah integral lintasan, integral bergantung lintasan dan integral bebas lintasan, integral Cauchy, perhitungan integral kompleks menggunakan fungsi pada MatLab.

14.1. Integral Lintasan

Misal $z(t): I \rightarrow \mathbf{C}$ merupakan fungsi kompleks dengan domain real, $I = [a, b]$, maka fungsi $z(t)$ dinyatakan dengan:

$$z(t) = x(t) + iy(t) \quad \text{dengan} \quad a \leq t \leq b$$

Grafik fungsi dari $z(t) = x(t) + iy(t)$ dengan $a \leq t \leq b$ yang menghubungkan dari titik A ke titik B dalam bidang kompleks ditunjukkan pada gambar 14 - 1 berikut:



Gambar 0-1

DAFTAR PUSTAKA

- [1]. Alexander Fiskhin, *Lecture Notes : The Fourier Transform and its Applications*, Stanford University, 2000.
- [2]. Andrews Jeffrey, *Lecture Notes : Linear Systems and Signals*, University of Texas, 2003.
- [3]. Anton Howard, *Calculus*, 3rd, John Wiley and sons, USA, 1988
- [4]. Earl D Rainville, Phillip E Bedient, *Elementary Differential Equations*, 7th, Maxwell Macmillan international Editions, Singapore, 1989
- [5]. E B Saff, A D Snider, *Fundamentals of Complex analysisfor Mathematics, Science and Engineering*, Printice Hall Inc, USA, 1976.
- [6]. Edwin J Purcell, Dale Van berg, *Calculus with analytic Geometry*, 5th, Prentice Hall, USA, 1987

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- [7]. Emmnuel C Ifeachor, Barrie W Jervis, *Digital Signal Processing : A Practical Approach*, 2nd , Prentice Hall, 2002
- [8]. John Douglas Moore , *Lecture Notes : Introduction to Partial Differential Equations*, 2002
- [9]. Kurt Arbenz, Alfred Wohlhauser, *Advanced Mathematics for Practicing Engineering* , Artech House Inc, USA, 1986
- [10]. Naresh K Sinha, *Linear System*, John Wiley and Sons, Kanada, 1991
- [11]. Roberts Clive, *Lecture Notes : Signals and Sysytems*, 2003 B Neta , *Lecture Notes : Partial Differential Equations*, Departement of Mathematics, Naval Postgraduate School, California, 2003
- [12]. Ronald N Bracewell, *The Fourier Transform and its Applications*, 3rd , MC Graw Hill, Singapore, 2000.
- [13]. Russell Martin, *Numerical and Analytical Techniques*, <http://www.eee.bham.ac.uk/russellm/eem3l1/EE3L1%20Slides%20L1%20vector%20spaces.PDF>.
- [14]. Stanley J Farlow, *An Introduction to Differential Equations and Their Applications* , Mc Graw-Hill Inc, USA, 1994
- [15]. S.J. Farlow, *Partial Differential Equations for Scientist and Engineers*, John Wiley and Sons, Canada, 1982
- [16]. William E Boyce, Richard C Diprima, *Elementary Differential Equation and Boundary Value Problems*, 5th , John Wiley and Sons Inc, Canada, 1992.