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THE A-INTEGRAL AND CAUCHY-GREEN'S FORMULA

Abstract

Let G be a simply connected bounded domain on the complex plane C, let $\gamma = \partial G$, and assume that γ is a closed rectifiable Jordan curve. Denote by m the Lebesgue linear measure on γ.

We consider the following problems:

1) find conditions on $F(z)$, defined on G and having a finite nontangential boundary value $F(t)$ for m-almost all $t \in \gamma$, the fucntion $F(t)$ is A-integrable and just the formula, analogue of formula Cauchy-Green.

2) find conditions on $F(z)$, analytical on G, $F(z)$ representable on G as a Cauchy A-integral.