RELATIVE GOL'DBERG ORDER OF A MULTIPLE ENTIRE DIRICHLET SERIES

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Abstract

In this paper we have introduced the notion of relative Gol'dberg order $\rho_{g,D}(f)$ of an entire function f represented by multiple Dirichlet series with respect to another entire function g represented by multiple Dirichlet series, where D is an arbitrary complete n-half plane. We have obtained a few relations between $\rho_{g,D}(f), \rho(f)$ and $\rho(g)$ where $\rho(f)$ and $\rho(g)$ are Dirichlet orders of f and g respectively. We have shown that the relative Gol'dberg order $\rho_{g,D}(f)$ is independent of the domain D. We also find out the relative order of a multiple Dirichlet polynomial with respect to another multiple Dirichlet polynomial, relative order of sum function of two multiple Dirichlet entire functions with respect to another multiple Dirichlet entire function.

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