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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.

Key Words: Multiple entire Dirichlet series, Gol'dberg order, Relative Gol'dberg order.

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