

ZetaZero

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Notations

Traditional name

Zeros of Riemann zeta function

Traditional notation

ρ_k

Mathematica StandardForm notation

ZetaZero[k]

Primary definition

10.13.02.0001.01

$\zeta(y) = 0$ /; $y = \rho_k \wedge k \in \mathbb{N}^+$

10.13.02.0002.01

$\rho_{-k} = 1 - \rho_k$ /; $k \in \mathbb{N}^+$

Numbers ρ_k /; $k \in \mathbb{N}^+$ form an ascending sequence of the so called nontrivial zeros of Riemann's zeta function $\zeta(s)$ on the critical half-line $s = \frac{1}{2} + it$ /; $t > 0$. Numbers $\rho_{-k} = 1 - \rho_k$ /; $k \in \mathbb{N}^+$ correspond to zeros located on the lower half-line $s = \frac{1}{2} + it$ /; $t < 0$.

Zeta function $\zeta(s)$ also has trivial zeros $s = -2k$ /; $k \in \mathbb{N}^+$, located on the real axis.

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