

Approximation of and by the Riemann zeta-function*

Paul M. Gauthier, University of Montreal, Canada

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Simple operations on the Riemann zeta-function generate approximations of all holomorphic functions. In the other direction, one can approximate the Riemann zeta-function extremely well by functions which fail to satisfy an analogue of the Riemann hypothesis and also by functions which do satisfy an analogue of the Riemann hypothesis. Moreover, the approximating functions share many important properties of the Riemann zeta-function.

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