An example of using LaTeX and Gnuplot: the Gamma function

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In mathematics, the gamma function is one commonly used extension of the factorial function to complex numbers. The gamma function is defined for all complex numbers except the non-positive integers. For any positive integer n,

$$\Gamma(n) = (n-1)! \, . \tag{1}$$

Derived by Daniel Bernoulli, for complex numbers with a positive real part the gamma function is defined via a convergent improper integral:

$$\Gamma(z) = \int_0^\infty x^{z-1} e^{-x} dx, \qquad \Re(z) > 0 \tag{2}$$

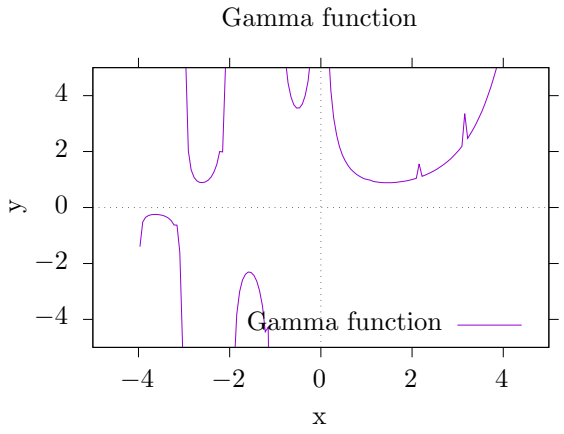

Figure 1: this is a caption