A brief introduction to LaTeXdocument preparation system

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Abstract

We show some basic capabilities of the LaTeXsystem: math, figures, references, sections...

1 Math

The gamma-function, denoted Γ, is usually defined via an integral,

$$\Gamma(z) = \int_0^\infty x^{z-1} e^{-x} dx \tag{1}$$

2 Numerical approximation of the gamma function

One of many simple approximations to the gamma function is the Gergo Nemes [1] formulae,

$$\Gamma(z) \approx \sqrt{\frac{2\pi}{z}} \left(\frac{1}{e} \left(z + \frac{1}{12z - \frac{1}{10z}} \right) \right)^z \tag{2}$$

References

[1] Nemes, Gergo (2010), "New asymptotic expansion for the Gamma function", Archiv der Mathematik, 95 (2): 161â€“169,

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