

Report on the error function

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June 20, 2018

The error function, also known as the Gauss error function, is a mathematical function given by

$$\operatorname{erf}(x) = \frac{1}{\sqrt{\pi}} \int_{-x}^x e^{-t^2} dt. \quad (1)$$

It usually occurs in probability, statistics, and partial differential equations describing diffusion.

It can be seen plotted in figure 1.

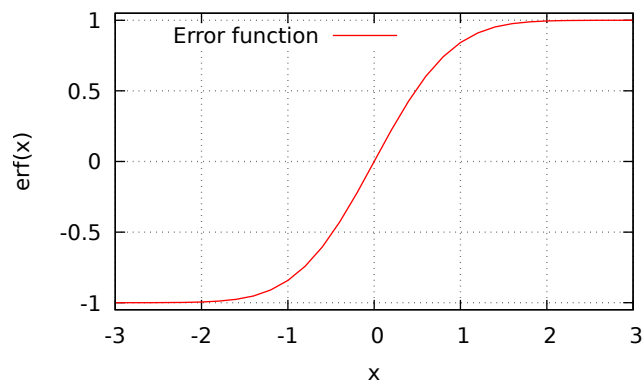


Figure 1: A plot of the error function on the interval $[-3,3]$.