

# integral representations of the Mascheroni constant\*

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Mascheroni's constant can be expressed by the following integrals:

$$\begin{aligned}\gamma &= -\int_0^1 \log(-\log x) dx \\ \gamma &= -\int_0^\infty e^{-x} \log x dx \\ \gamma &= \int_0^\infty \left( \frac{1}{e^t - 1} - \frac{1}{te^t} \right) dt \\ \gamma &= \int_0^\infty \left( \frac{1}{t} - \frac{1}{1+t} - \frac{1}{te^t} \right) dt\end{aligned}$$

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