

Calcolo della costante di Eulero-Mascheroni

$$\sum_{k=1}^n \frac{1}{k} = \log n + \gamma + O\left(\frac{1}{n}\right)$$

$$\gamma = \lim_{n \rightarrow \infty} \left(\sum_{k=1}^n \frac{1}{k} - \log n \right)$$

Calcolo di $\Gamma(3/2)$

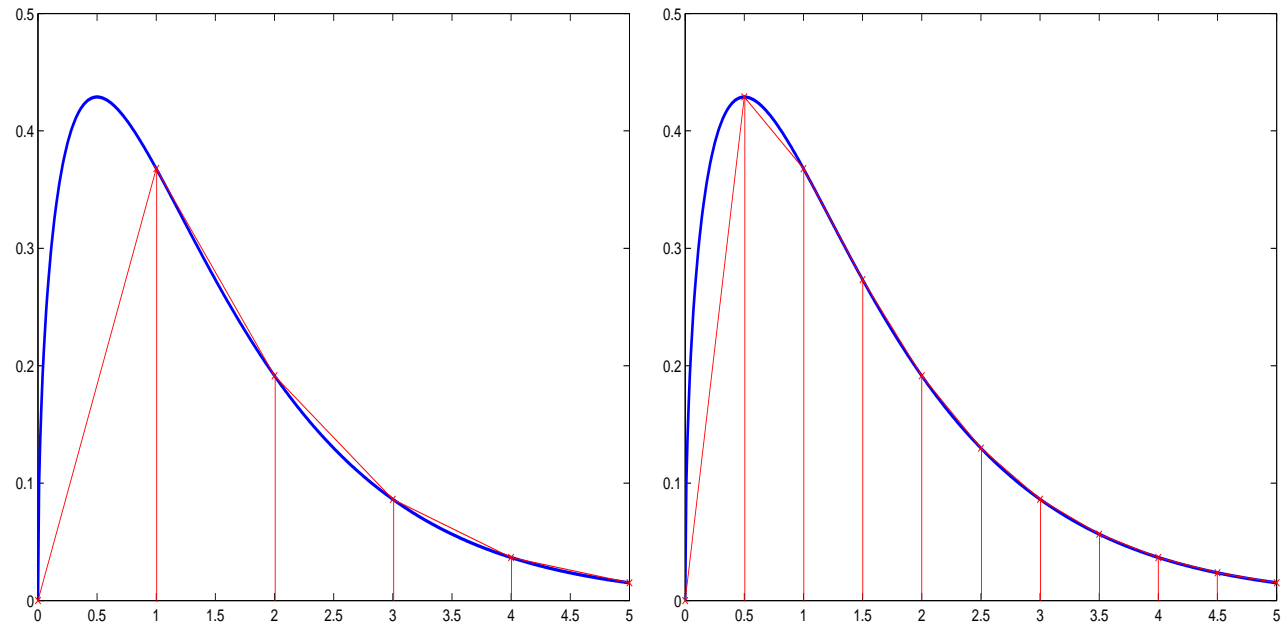
$$\left(\frac{1}{2}\right)! = \Gamma\left(\frac{3}{2}\right) = \frac{\sqrt{\pi}}{2}$$

$$\Gamma(z) = \int_0^{\infty} e^{-t} t^{z-1} dt$$

$$\Gamma(z) = \lim_{n \rightarrow \infty} \frac{n!}{(z)_{n+1}} n^z$$

$$(x)_n = x(x+1)(x+2) \dots (x+n-1)$$

Metodo dei trapezi



$$f(x) = e^{-x} \sqrt{x}$$

$$\int_0^M f(t) dt = \lim_{n \rightarrow \infty} \sum_{k=0}^{n-1} \frac{f(x_k) + f(x_{k+1})}{2} \frac{M}{n}$$