

## Gregory Series

The Gregory series for  $\pi$  is

$$\pi = 4 \sum_{k=1}^{\infty} \frac{(-1)^{k+1}}{2k-1} \quad (1)$$

The series (1) is obtained by plugging  $x = 1$  into the Leibniz series for  $\tan^{-1} x$ .