**Contact information:**
Thijs van den Berg
Managing Director - SITMO

web: www.sitmo.com
email: thijs@sitmo.com
phone: +31 6 24110061



# Clenshaw-Curtis quadrature

created by **Thijs van den Berg**

$$\int_{-1}^{1} f(x)\,dx \approx a_0 + \sum_{k=1}^{N-1} \frac{2a_k}{1-k^2}$$

$$a_k \approx \frac{f(1)}{N} + \frac{f(-1)}{N}(-1)^k + \frac{2}{N}\sum_{n=1}^{N-1} f(\cos[\frac{n\pi}{N}])\cos(k\frac{n\pi}{N})$$

The Clenshaw-Curtis quadrature are used for numerical approximation of integrals.
It has an accuracy comparable to that of the Gaussian quadrature, and has natural extensions for adaptive integration.

## Symbol list:

$f(x)$ The function to be integrated.