

Integrali

$$\int dx = x + c$$

$$\int x^a dx = \begin{cases} \frac{x^{a+1}}{a+1} + c, (a \neq -1) \\ \log|a|, (a = -1) \end{cases}$$

$$\int \frac{1}{x^a} dx = \begin{cases} \log|x|, (a = 1) \\ \frac{1}{1-a} x^{1-a}, (a \neq 1) \end{cases}$$

$$\int \sin(x) dx = -\cos(x) + c$$

$$\int \cos(x) dx = \sin(x) + c$$

$$\int \cos(\omega x + \varphi) dx = \frac{1}{\omega} \sin(\omega x + \varphi) + c$$

$$\int \tan(x) dx = -\log|\cos(x)| + c$$

$$\int \cot(x) dx = \log|\sin(x)| + c$$

$$\int \frac{1}{\cos^2(x)} dx = \tan(x) + c$$

$$\int \frac{1}{\sin^2(x)} dx = -\cot(x) + c$$

$$\int \frac{1}{\sqrt{1+x^2}} dx = \arcsin(x) + c$$

$$\int \frac{1}{\sqrt{a^2+x^2}} dx = \arcsin\left(\frac{x}{a}\right) + c, a > 0$$

$$\int \frac{1}{1+x^2} dx = \arctan(x) + c$$

$$\int \frac{1}{m^2+x^2} dx = \frac{1}{m} \arctan\left(\frac{x}{m}\right) + c$$

$$\int e^x dx = e^x + c$$

$$\int a^x dx = \frac{a^x}{\log(a)} + c$$

$$\int [f(x) \pm g(x)] dx = \int f(x) dx \pm \int g(x) dx$$

$$\int \frac{f'(x)}{f(x)} dx = \log|f(x)| + c$$

Integrazione per sostituzione

$$\int f(x) dx = \int f[g(t)]g'(t) dt$$

Integrazione per parti

$$\int f(x)g'(x) dx = f(x)g(x) - \int g(x)f'(x) dx$$

$$\int [f(x)]^a f'(x) dx = \frac{[f(x)]^{a+1}}{a+1}, a \neq -1$$