

## Alapintegrálok

$$\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1} \quad (x \neq 1)$$

$$\int \frac{1}{x} dx = \ln|x|$$

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

$$\int a^x dx = \frac{a^x}{\ln a}$$

$$\int \sin x dx = -\cos x$$

$$\int \cos x dx = \sin x$$

$$\int \operatorname{sh} x dx = \operatorname{ch} x$$

$$\int \operatorname{ch} x dx = \operatorname{sh} x$$

$$\int \frac{1}{\cos^2 x} dx = \operatorname{tg} x$$

$$\int \frac{1}{\sin^2 x} dx = -\operatorname{ctg} x$$

$$\int \frac{1}{\operatorname{ch}^2 x} dx = \operatorname{th} x$$

$$\int \frac{1}{\operatorname{sh}^2 x} dx = -\operatorname{cth} x$$

$$\int \frac{1}{1+x^2} dx = \operatorname{arctg} x$$

$$\int \frac{1}{\sqrt{1-x^2}} dx = \operatorname{arcsin} x$$

$$\int \frac{1}{\sqrt{1+x^2}} dx = \operatorname{arsh} x$$

$$\int \frac{1}{\sqrt{x^2-1}} dx = \operatorname{arch} x$$

## Integrálási szabályok

$$\int (f \pm g) = \int f \pm \int g$$

$$\int c \cdot f = c \cdot \int f$$

$$\int f(ax+b) dx = \frac{F(ax+b)}{a}, \quad \text{ha } \int f = F$$

$$\int f' \cdot f^\alpha = \frac{f^{\alpha+1}}{\alpha+1} \quad (x \neq 1)$$

$$\int \frac{f'}{f} = \ln f$$

$$\int f(g(x)) \cdot g'(x) dx = F(g(x)), \quad \text{ha } \int f = F$$

$$\int f' \cdot g = f \cdot g - \int f \cdot g' \quad (\text{parciális integrálás})$$