

Tablica derivacija

$f(x)$	$f'(x)$
konstanta	0
$x^q \quad (q \in \mathbb{Q})$	qx^{q-1}
$a^x \quad (a > 0, a \neq 1)$	$a^x \ln a$
e^x	e^x
$\log_a x \quad (a > 0, a \neq 1)$	$\frac{1}{x \ln a}$
$\ln x$	$\frac{1}{x}$
$\sin x$	$\cos x$
$\cos x$	$-\sin x$
$\operatorname{tg} x$	$\frac{1}{\cos^2 x}$
$\operatorname{ctg} x$	$-\frac{1}{\sin^2 x}$
$\arcsin x$	$\frac{1}{\sqrt{1-x^2}}$
$\arccos x$	$-\frac{1}{\sqrt{1-x^2}}$
$\operatorname{arctg} x$	$\frac{1}{1+x^2}$
$\operatorname{arcctg} x$	$-\frac{1}{1+x^2}$

Derivacija produkta:

$$(uv)' = u'v + uv'$$

Derivacija kvocijenta:

$$\left(\frac{u}{v}\right)' = \frac{u'v - uv'}{v^2}$$

Tablica integrala

$$\int x^q dx = \frac{x^{q+1}}{q+1} + C \quad (q \in \mathbb{Q} \setminus \{-1\})$$

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

$$\int a^x dx = \frac{a^x}{\ln a} + C \quad (a > 0, a \neq 1)$$

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

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

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

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

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

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

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

Formula parcijalne integracije:

$$\int u dv = uv - \int v du.$$