Tablica derivacija

$c' = 0 \qquad (c \in \mathbb{R}$ konstanta$)$

$x' = 1$

$(x^n)' = nx^{n-1} \qquad (n \in \mathbb{Z})$

$(x^a)' = ax^{a-1} \qquad (a \in \mathbb{R},\ x > 0)$

$$(\sqrt{x})' = \frac{1}{2\sqrt{x}} \qquad (x > 0)$$

$(\sin x)' = \cos x$

$(\cos x)' = -\sin x$

$$(\operatorname{tg} x)' = \frac{1}{\cos^2 x}$$

$$(\operatorname{ctg} x)' = -\frac{1}{\sin^2 x}$$

$$(\arcsin x)' = \frac{1}{\sqrt{1-x^2}} \qquad (|x| < 1)$$

$$(\arccos x)' = -\frac{1}{\sqrt{1-x^2}} \qquad (|x| < 1)$$

$$(\operatorname{arctg} x)' = \frac{1}{1+x^2}$$

$$(\operatorname{arcctg} x)' = -\frac{1}{1+x^2}$$

$(a^x)' = a^x \ln a \qquad (a > 0)$

$(e^x)' = e^x$

$$(\log_a x)' = \frac{1}{x \ln a} \qquad (a > 0,\ a \neq 1,\ x > 0)$$

$$(\ln x)' = \frac{1}{x} \qquad (x > 0)$$

$(\operatorname{sh} x)' = \operatorname{ch} x$

$(\operatorname{ch} x)' = \operatorname{sh} x$

$$(\operatorname{th} x)' = \frac{1}{\operatorname{ch}^2 x}$$

$$(\operatorname{cth} x)' = -\frac{1}{\operatorname{sh}^2 x}$$

$$(\operatorname{Arsh} x)' = \frac{1}{\sqrt{1+x^2}}$$

$$(\operatorname{Arch} x)' = \frac{1}{\sqrt{x^2-1}} \qquad (x > 1)$$

$$(\operatorname{Arth} x)' = \frac{1}{1-x^2} \qquad (|x| < 1)$$

$$(\operatorname{Arcth} x)' = \frac{1}{1-x^2} \qquad (|x| > 1)$$

Pravila deriviranja

$(u(x) \pm v(x))' = u'(x) \pm v'(x)$

$(c \cdot u(x))' = c \cdot u'(x)$

$(u(x) \cdot v(x))' = u'(x)v(x) + u(x)v'(x)$

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

$$\left(\frac{1}{v(x)}\right)' = -\frac{v'(x)}{v(x)^2}$$

$$\Big(f(g(x))\Big)' = f'(g(x)) \cdot g'(x)$$

Derivacije višeg reda

$(a^x)^{(n)} = a^x \ln^n a \qquad (a > 0)$

$(\sin x)^{(n)} = \sin\left(x + \frac{n\pi}{2}\right)$

$(\cos x)^{(n)} = \cos\left(x + \frac{n\pi}{2}\right)$

$$(\operatorname{sh} x)^{(n)} = \begin{cases} \operatorname{sh} x, & n \text{ paran} \\ \operatorname{ch} x, & n \text{ neparan} \end{cases}$$

$$(\operatorname{ch} x)^{(n)} = \begin{cases} \operatorname{ch} x, & n \text{ paran} \\ \operatorname{sh} x, & n \text{ neparan} \end{cases}$$

$(x^m)^{(n)} = m(m-1)\cdots(m-n+1)x^{m-n} \ (m \in \mathbb{Z})$

$(u \cdot v)^{(n)}(x) = \sum_{k=0}^{n} \binom{n}{k} u^{(k)}(x) \cdot v^{(n-k)}(x)$