

Tablica derivacija

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

$$x' = 1$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Pravila deriviranja

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

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

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

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

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

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