

## Wzory na pochodne:

1.  $(C)' = 0$
2.  $(x^n)' = nx^{n-1}$
3.  $(x)' = 1$
4.  $\left(\frac{a}{x}\right)' = -\frac{a}{x^2}$
5.  $(\sqrt{x})' = \frac{1}{2\sqrt{x}}$
6.  $(a^x)' = a^x \ln a$
7.  $(e^x)' = e^x$
8.  $(\log_a x)' = \frac{1}{x \ln a}$
9.  $(\ln x)' = \frac{1}{x}$
10.  $(\sin x)' = \cos x$
11.  $(\cos x)' = -\sin x$
12.  $(\operatorname{tg} x)' = \frac{1}{\cos^2 x}$
13.  $(\operatorname{ctg} x)' = -\frac{1}{\sin^2 x}$
14.  $(\arcsin x)' = \frac{1}{\sqrt{1-x^2}}$
15.  $(\arccos x)' = -\frac{1}{\sqrt{1-x^2}}$
16.  $(\operatorname{arctg} x)' = \frac{1}{x^2+1}$
17.  $(\operatorname{arcctg} x)' = -\frac{1}{x^2+1}$

## Właściwości pochodnych:

1.  $[f(x) + g(x)]' = f'(x) + g'(x)$
2.  $[f(x) - g(x)]' = f'(x) - g'(x)$
3.  $[a \cdot f(x)]' = a \cdot f'(x)$
4.  $[f(x) \cdot g(x)]' = f'(x)g(x) + f(x)g'(x)$
5.  $\left[\frac{f(x)}{g(x)}\right]' = \frac{f'(x)g(x) - f(x)g'(x)}{[g(x)]^2}$

### Wzory przydatne w liczeniu pochodnych:

$$\sqrt[b]{x^a} = x^{\frac{a}{b}}$$

$$\frac{1}{x^a} = x^{-a}$$