

Přehled derivací elementárních funkcí

1)	$f(x) = x$	$f'(x) = 1$	$D' = \mathbf{R}$	
2)	$f(x) = c = konst.$	$f'(x) = 0$	$D' = \mathbf{R}$	
3)	$f(x) = x^n$	$f'(x) = n \cdot x^{n-1}$	$D' = \mathbf{R}$ $D' = (0, \infty)$	pro $n \in \mathbf{Z}$ pro $n \in \mathbf{R}$
4)	$f(x) = e^x$	$f'(x) = e^x$	$D' = \mathbf{R}$	
	$f(x) = a^x$	$f'(x) = a^x \cdot \ln a$	$D' = \mathbf{R}$	pro $a \in \mathbf{R}, a > 0$
5)	$f(x) = \ln x$	$f'(x) = \frac{1}{x}$	$D' = (0, \infty)$	
6)	$f(x) = \sin x$	$f'(x) = \cos x$	$D' = \mathbf{R}$	
7)	$f(x) = \cos x$	$f'(x) = -\sin x$	$D' = \mathbf{R}$	
8)	$f(x) = \operatorname{tg} x$	$f'(x) = \frac{1}{\cos^2 x}$	$D' = \mathbf{R} \setminus \bigcup_{k \in \mathbf{Z}} \left\{ (2k+1) \cdot \frac{\pi}{2} \right\}$	
9)	$f(x) = \operatorname{cotg} x$	$f'(x) = -\frac{1}{\sin^2 x}$	$D' = \mathbf{R} \setminus \bigcup_{k \in \mathbf{Z}} \{k \cdot \pi\}$	
10)	$f(x) = \arcsin x$	$f'(x) = \frac{1}{\sqrt{1-x^2}}$	$D' = (-1, 1)$	
11)	$f(x) = \arccos x$	$f'(x) = -\frac{1}{\sqrt{1-x^2}}$	$D' = (-1, 1)$	
12)	$f(x) = \operatorname{arctg} x$	$f'(x) = \frac{1}{1+x^2}$	$D' = \mathbf{R}$	
13)	$f(x) = \operatorname{arccotg} x$	$f'(x) = -\frac{1}{1+x^2}$	$D' = \mathbf{R}$	
14)	$f(x) = \sinh x$	$f'(x) = \cosh x$	$D' = \mathbf{R}$	
15)	$f(x) = \cosh x$	$f'(x) = \sinh x$	$D' = \mathbf{R}$	
16)	$f(x) = \operatorname{tgh} x$	$f'(x) = \frac{1}{\cosh^2 x}$	$D' = \mathbf{R}$	
17)	$f(x) = \operatorname{cotgh} x$	$f'(x) = -\frac{1}{\sinh^2 x}$	$D' = \mathbf{R} \setminus \{0\}$	
18)	$f(x) = \operatorname{argsinh} x$	$f'(x) = \frac{1}{\sqrt{1+x^2}}$	$D' = \mathbf{R}$	
19)	$f(x) = \operatorname{argcosh} x$	$f'(x) = \frac{1}{\sqrt{x^2-1}}$	$D' = (1, \infty)$	
20)	$f(x) = \operatorname{argtgh} x$	$f'(x) = \frac{1}{1-x^2}$	$D' = (-1, 1)$	
21)	$f(x) = \operatorname{argcotgh} x$	$f'(x) = \frac{1}{1-x^2}$	$D' = (-\infty, -1) \cup (1, \infty)$	