

Spocitejte derivace nasledujicich funkci:

1.  $\sinh x = \frac{e^x - e^{-x}}{2}$
2.  $\cosh x = \frac{e^x + e^{-x}}{2}$
3.  $\tanh x = \frac{\sinh x}{\cosh x}$
4.  $\frac{\sin t}{t} + \frac{t}{\sin t}$
5.  $\sin^2(\cos 3x)$
6.  $\ln \frac{1 + \tan \frac{x}{2}}{1 - \tan \frac{x}{2}}$
7.  $\ln \frac{x^3 + x + 1}{x^2 + 1}$
8.  $A^{\tan^2 x}$
9.  $\sqrt{\cos x} \cdot e^{\sqrt{\cos x}}$
10.  $\ln \cos \frac{x-1}{x}$
11.  $\ln(x \pm \sqrt{a^2 + x^2})$
12.  $\frac{x}{2} \sqrt{1 - x^2} + \frac{1}{2} \arcsin x$
13.  $\arcsin \sqrt{\frac{x}{x+1}} + \arctan \sqrt{x}$
14.  $\log_7 \frac{x^2 - 1}{x - 1}$
15.  $\sqrt[3]{\cos^5 x}$