双曲三角函数及反双曲三角函数求导公式

$\sinh x = \frac{e^x - e^{-x}}{2}$	$(\sinh x)' = \cosh x = \frac{e^x + e^{-x}}{2}$
$\cosh x = \frac{e^x + e^{-x}}{2}$	$(\cosh x)' = \sinh x = \frac{e^x - e^{-x}}{2}$
$\tanh x = \frac{\sinh x}{\cosh x}$	$(\tanh x)' = \mathrm{sech}^2(x)$
$\coth x = \frac{1}{\tanh x}$	$(\coth x)' = -\mathrm{csch}^2 x$
$\mathrm{sech} x = \frac{1}{\cosh x}$	$(\mathrm{sech} x)' = -\tanh x \, \mathrm{sech} x$
$\mathrm{csch} x = \frac{1}{\sinh x}$	$(\mathrm{csch} x)' = -\coth x \, \mathrm{csch} x$
$\mathrm{arcsinh} x = \ln(x + \sqrt{x^2+1})$ $X \in (-\infty, +\infty)$	$(\arcsin x)' = \frac{1}{\sqrt{x^2+1}}$
$\arccos x = \ln(x + \sqrt{x^2-1})$ $X \in [1, +\infty)$	$(\arccos x)' = \frac{1}{\sqrt{x^2-1}}$
$\mathrm{arctan\,h} x = \ln\sqrt{\frac{1+x}{1-x}} \quad (-1,1)$	$(\mathrm{arctan\,h} x)' = \frac{1}{1-x^2}$
$\mathrm{arcsec\,h} x = \pm\ln\frac{1+\sqrt{1-x^2}}{x}$	$(\mathrm{arcsec\,h} x)' = \frac{-1}{x\sqrt{1-x^2}}$
$\mathrm{csch}^{-1} x = \begin{cases} \ln\frac{1-\sqrt{1+x^2}}{x} & x < 0 \\ \ln\frac{1+\sqrt{1+x^2}}{x} & x > 0 \end{cases}$	$(\mathrm{arccsc\,h} x)' = \frac{-1}{\lvert x \rvert \sqrt{1-x^2}}$
$\mathrm{arccot\,h} x = \ln\sqrt{\frac{x+1}{x-1}}$ $X \in (-\infty, -1) \cup (1, +\infty)$	$(\mathrm{arccot\,h} x)' = \frac{1}{1-x^2}$