Mat. Approbatur 1 B: Analyysin kaavoja

Trigonometristen funktioiden kaavoja	Funktio	Derivaatta
$\sin(x+y) = \sin x \cos y + \cos x \sin y$	x^r	$r x^{r-1}$ *
$\cos(x+y) = \cos x \cos y - \sin x \sin y$	$\sin x$	$\cos x$ *
$\sin 2x = 2 \sin x \cos x$ *	$\cos x$	$-\sin x$ *
$\cos 2x = 2 \cos^2 x - 1$ *	$\tan x$	$\dfrac{1}{\cos^2 x} = 1 + \tan^2 x$ °
$\sin^2 x + \cos^2 x = 1$ *	$\cot x$	$-\dfrac{1}{\sin^2 x} = -1 - \cot^2 x$ °
Hyperbelifunktioiden kaavoja	e^x	e^x *
$\sinh x = \frac{1}{2}(e^x - e^{-x})$ *	$\ln|x|$	$\dfrac{1}{x}$ *
$\cosh x = \frac{1}{2}(e^x + e^{-x})$ *	$\sinh x$	$\cosh x$ °
$\sinh(x+y) = \sinh x \cosh y + \cosh x \sinh y$	$\cosh x$	$\sinh x$ °
$\cosh(x+y) = \cosh x \cosh y + \sinh x \sinh y$	$\tanh x$	$\dfrac{1}{\cosh^2 x} = 1 - \tanh^2 x$
$\sinh 2x = 2 \sinh x \cosh x$	$\coth x$	$-\dfrac{1}{\sinh^2 x} = 1 - \coth^2 x$
$\cosh 2x = 2 \cosh^2 x - 1$	$\operatorname{arsinh} x$	$\dfrac{1}{\sqrt{x^2 + 1}}$
$\cosh^2 x - \sinh^2 x = 1$	$\operatorname{arcosh} x$	$\dfrac{1}{\sqrt{x^2 - 1}}$
$\operatorname{arsinh} x = \ln(x + \sqrt{x^2 + 1})$	$\operatorname{artanh} x$	$\dfrac{1}{1 - x^2}$
$\operatorname{arcosh} x = \ln(x + \sqrt{x^2 - 1})$	$\operatorname{arcoth} x$	$\dfrac{1}{1 - x^2}$
$\operatorname{artanh} x = \frac{1}{2} \ln \dfrac{1+x}{1-x}$	$\arcsin x$	$\dfrac{1}{\sqrt{1 - x^2}}$ *
$\operatorname{arcoth} x = \frac{1}{2} \ln \dfrac{x+1}{x-1}$	$\arccos x$	$-\dfrac{1}{\sqrt{1 - x^2}}$ *
	$\arctan x$	$\dfrac{1}{1 + x^2}$ *
Muistettava kaava! * *Muistettava tai johdettava kaava!* °	$\operatorname{arccot} x$	$-\dfrac{1}{1 + x^2}$