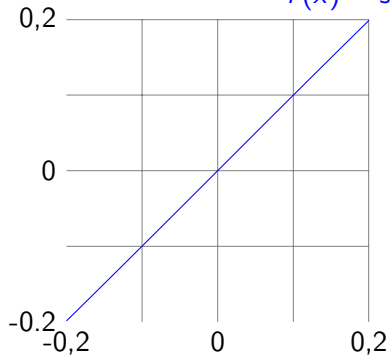
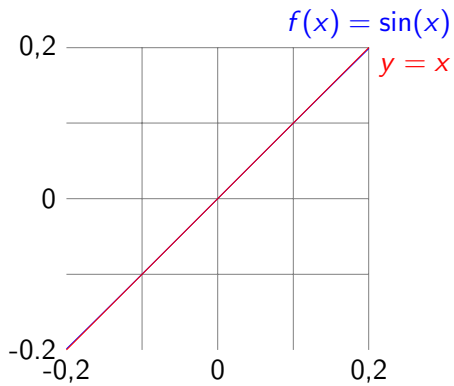
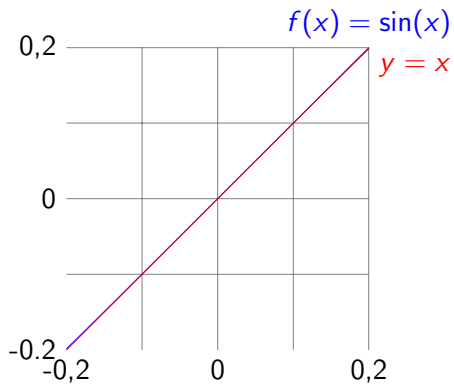


x	$f(x)$	$L(x)$
0.80000	2.05000	2
0.90000	2.01111	2
1.00000	2.00000	2
1.10000	2.00909	2
1.20000	2.03333	2

$$f(x) = \sin(x)$$







x	$f(x)$	$L(x)$
-0.20000	-0.19867	-0.20000
-0.10000	-0.09983	-0.10000
0.00000	0.00000	0.00000
0.10000	0.09983	0.10000
0.20000	0.19867	0.20000

Hyperbolske funksjoner

$$1. \sinh(x) = \frac{e^x - e^{-x}}{2}$$

$$2. \cosh(x) = \frac{e^x + e^{-x}}{2}$$

$$3. \tanh(x) = \frac{\sinh(x)}{\cosh(x)} = \frac{e^x - e^{-x}}{e^x + e^{-x}}$$

$$4. \coth(x) = \frac{1}{\tanh(x)} = \frac{\cosh(x)}{\sinh(x)} = \frac{e^x + e^{-x}}{e^x - e^{-x}}, x \neq 0$$

$$5. \operatorname{sech}(x) = \frac{1}{\cosh(x)} = \frac{2}{e^x + e^{-x}}$$

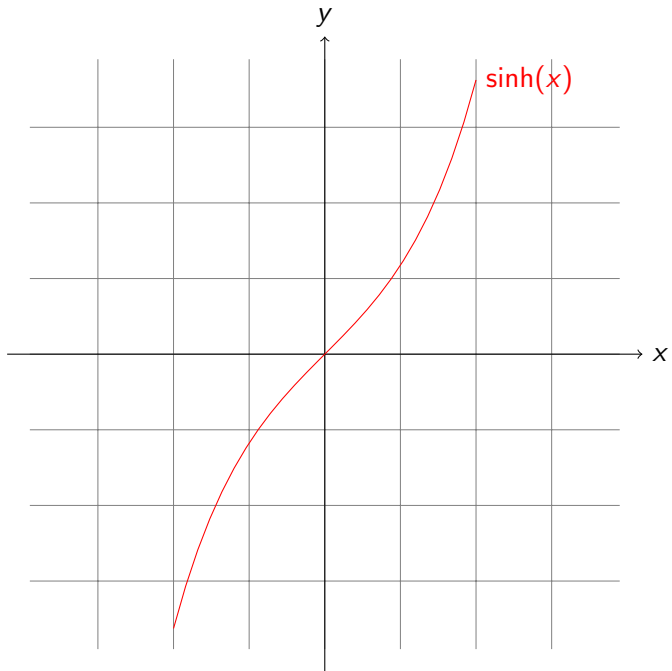
$$6. \operatorname{csch}(x) = \frac{1}{\sinh(x)} = \frac{2}{e^x - e^{-x}}, x \neq 0$$

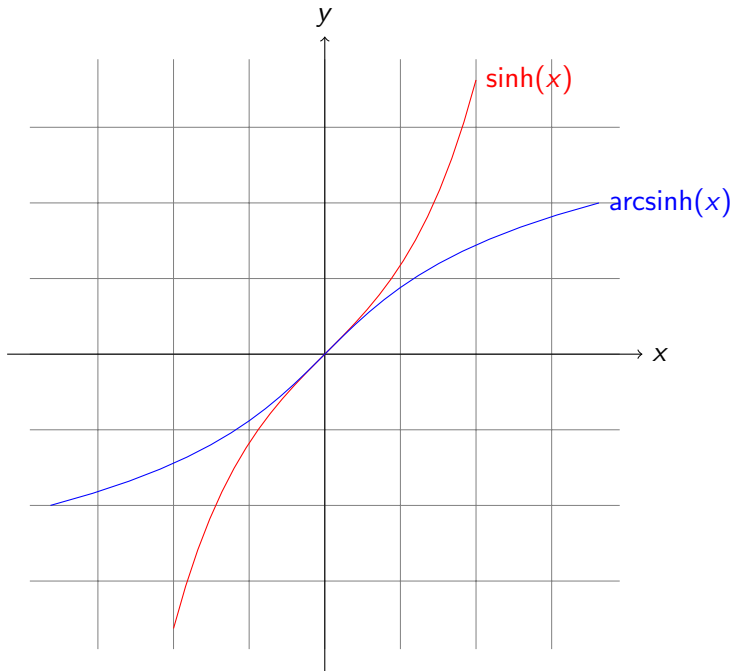
Formler for hyperbolske funksjoner

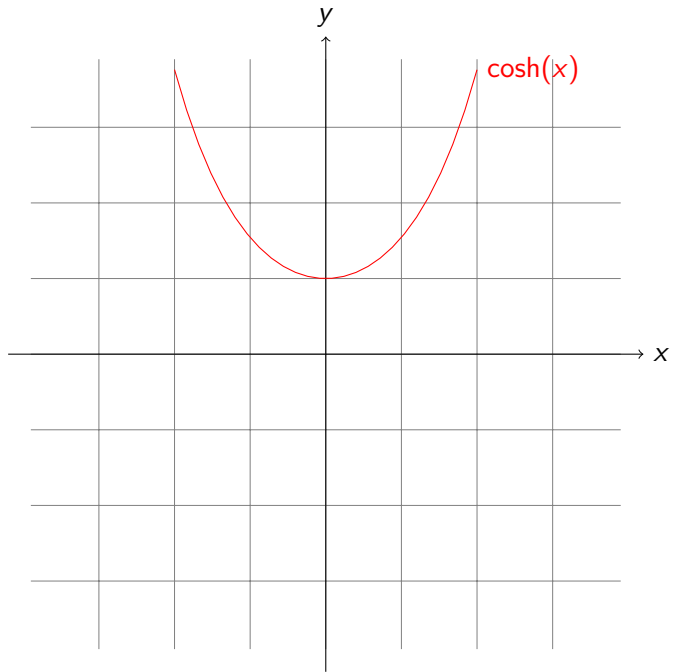
1. $\cosh^2(x) - \sinh^2(x) = 1$
2. $\sinh(2x) = 2 \sinh(x) \cosh(x)$
3. $\cosh(2x) = \cosh^2(x) + \sinh^2(x)$
4. $\cosh^2(x) = \frac{\cosh(2x)+1}{2}$
5. $\sinh^2(x) = \frac{\cosh(2x)-1}{2}$
6. $\tanh^2(x) = 1 - \operatorname{sech}^2(x)$
7. $\operatorname{coth}^2(x) = 1 + \operatorname{csch}^2(x)$

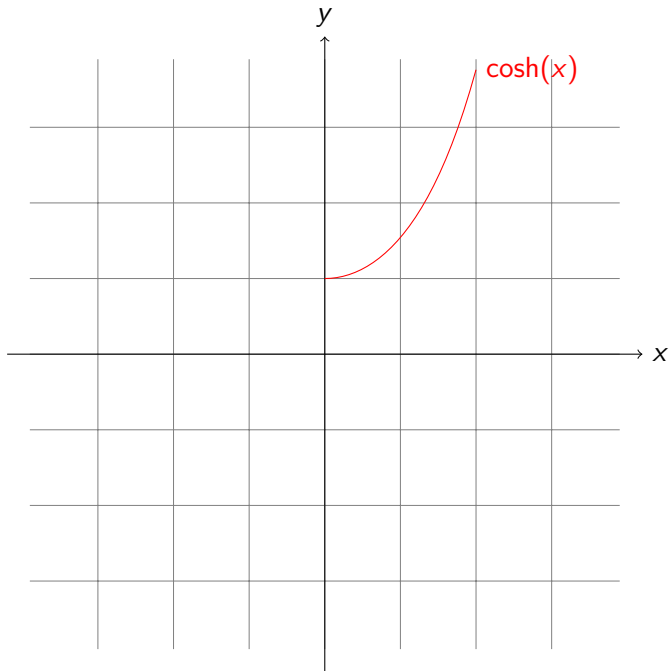
Deriverte av hyperbolske funksjoner

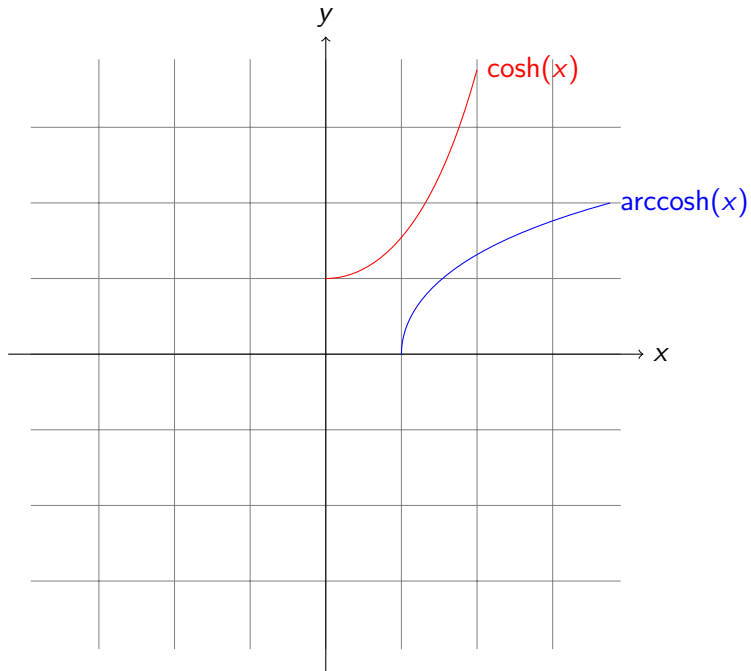
1. $\frac{d}{dx}(\sinh(x)) = \cosh(x)$
2. $\frac{d}{dx}(\cosh(x)) = \sinh(x)$
3. $\frac{d}{dx}(\tanh(x)) = \operatorname{sech}^2(x)$
4. $\frac{d}{dx}(\coth(x)) = -\operatorname{csch}^2(x)$
5. $\frac{d}{dx}(\operatorname{sech}(x)) = -\operatorname{sech}(x)\tanh(x)$
6. $\frac{d}{dx}(\operatorname{csch}(x)) = -\operatorname{csch}(x)\coth(x)$











Inverse hyperbolske funksjoner

1. $\operatorname{arcsinh}(x) = \ln(x + \sqrt{x^2 + 1})$
2. $\operatorname{arccosh}(x) = \ln(x + \sqrt{x^2 - 1}), x \geq 1$
3. $\operatorname{arctanh}(x) = \frac{1}{2} \ln\left(\frac{1+x}{1-x}\right), |x| < 1$
4. $\operatorname{arcoth}(x) = \frac{1}{2} \ln\left(\frac{1+x}{1-x}\right), |x| > 1$
5. $\operatorname{arcsech}(x) = \ln\left(\frac{1+\sqrt{1-x^2}}{x}\right), 0 < x \leq 1$
6. $\operatorname{arccsch}(x) = \ln\left(\frac{1}{x} + \frac{\sqrt{1+x^2}}{|x|}\right), x \neq 0$

Deriverte af inverse hyperbolske funksjoner

1. $\frac{d}{dx}(\operatorname{arcsinh}(x)) = \frac{1}{\sqrt{1+x^2}}$
2. $\frac{d}{dx}(\operatorname{arccosh}(x)) = \frac{-1}{\sqrt{x^2-1}}, x > 1$
3. $\frac{d}{dx}(\operatorname{arctanh}(x)) = \frac{1}{1-x^2}, |x| < 1$
4. $\frac{d}{dx}(\operatorname{arcoth}(x)) = \frac{-1}{1-x^2}, |x| > 1$
5. $\frac{d}{dx}(\operatorname{arcsech}(x)) = \frac{-1}{x\sqrt{1-x^2}}, 0 < x < 1$
6. $\frac{d}{dx}(\operatorname{arccsch}(x)) = \frac{-1}{|x|\sqrt{1+x^2}}, x \neq 0$