Hyperbolic Functions: Examples

SYMPLIT

1. Evaluate:
   (a) $\sinh(\ln 2)$
   (b) $\cosh(\ln 2)$
   (c) $\tanh(\ln 2)$
2. Simplify the expression: $\sinh(\ln(x+1))$
3. Simplify the expression $\operatorname{csch}(-\ln x)$
4. Let $f(x) = \cosh(x^2)$. Find $f'(x)$
5. Let $f(x) = x^2 \tanh(4x)$. Find $f'(x)$
6. Let $f(x) = \sin(x)\sinh(x)$. Find $f'(x)$
7. Let $f(x) = \operatorname{sech}(\cos x)$. Find $f'(x)$
8. Let $f(x) = \cosh^{-1}(\sec x)$. Find $f'(x)$
9. Let $f(x) = \sinh^{-1}(\tan(x^3))$. Find $f'(x)$