

Hyperbolic Functions Proof	
<p>Use the exponential definitions of $\sinh x$ and $\cosh x$ to show that:</p> $\cosh^2 x - \sinh^2 x = 1$	<p>Show that</p> $\tanh x = \frac{e^{2x} - 1}{e^{2x} + 1}$
<p>Find in terms of e:</p> $\sinh(3)$	<p>Hyperbolic sine can be defined exponentially as:</p> $\sinh x = \frac{e^x - e^{-x}}{2}$
<p>Use the exponential definitions to find the derivative of $\sinh x$</p> $\frac{d}{dx}(\sinh x) = ?$	<p>Use the exponential definitions to find the integral of $\cosh x$</p> $\int \cosh x \, dx = ?$
<p>Find the value of</p> $\cosh(5)$ <p>to 2 decimal places</p>	<p>Use the exponential definitions to find the derivative of $\cosh x$</p> $\frac{d}{dx}(\cosh x) = ?$
<p>Hyperbolic cosine can be defined exponentially as:</p> $\cosh x = \frac{e^x + e^{-x}}{2}$	<p>(a) Find $\sinh(-x)$ in terms of $\sinh(x)$</p> <p>(b) Find $\cosh(-x)$ in terms of $\cosh(x)$</p>
<p>Use the exponential definitions to find the integral of $\sinh x$</p> $\int \sinh x \, dx = ?$	<p>Hyperbolic tangent can be defined as:</p> $\tanh x = \frac{\sinh x}{\cosh x}$