log(1+exp(-2arctanh(cos(2t)))) + 2arctanh(cos(2t))/(exp(2arctanh(cos(2t)))+1)





Γ Extended Keyboard

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Examples

Random

Assuming "log" is the natural logarithm | Use the base 10 logarithm instead

Input:

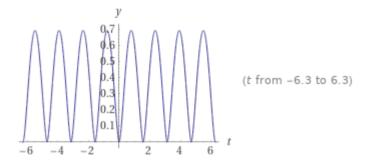
$$\log (1 + \exp(-2 \tanh^{-1}(\cos(2t)))) + 2 \times \frac{\tanh^{-1}(\cos(2t))}{\exp(2 \tanh^{-1}(\cos(2t))) + 1}$$

 $tanh^{-1}(x)$ is the inverse hyperbolic tangent function log(x) is the natural logarithm

Exact result:

$$\frac{2\tanh^{-1}(\cos(2t))}{e^{2\tanh^{-1}(\cos(2t))} + 1} + \log(e^{-2\tanh^{-1}(\cos(2t))} + 1)$$

Plots:



Alternate forms:

More

$$\log\bigl(\sec^2(t)\bigr) + 2\sin^2(t)\tanh^{-1}(\cos(2\,t))$$

$$\frac{2 \tanh^{-1}(\cos(2 \, t))}{e^{2 \tanh^{-1}(\cos(2 \, t))} + 1} + \log \left(e^{-2 \tanh^{-1}(\cos(2 \, t))} \left(e^{2 \tanh^{-1}(\cos(2 \, t))} + 1\right)\right)$$

$$\frac{1}{e^{2\tanh^{-1}(\cos(2t))}+1} \left(2\tanh^{-1}(\cos(2t))+\right)$$

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