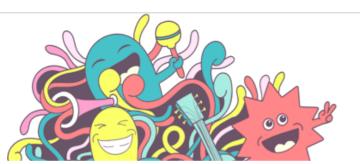
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solve y"-y=a cosh(tx)







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EXAMPLES 

UPLOAD 

RANDOM







Input interpretation

$$y''(x) - y(x) = a \cosh(t x)$$

 $\cosh(x)$  is the hyperbolic cosine function

Result

✓ Step-by-step solution

$$y(x) = \frac{a \cosh(t x)}{t^2 - 1} + c_1 e^x + c_2 e^{-x}$$

**ODE** classification

second-order linear ordinary differential equation

Alternate forms

$$a \cosh(t x) + y(x) = y''(x)$$

$$y''(x) - y(x) = \frac{1}{2} a e^{-tx} + \frac{1}{2} a e^{tx}$$

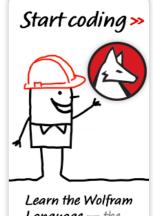
Possible Lagrangian

$$\mathcal{L}(y', y, x) = \frac{1}{2} (2 a y \cosh(t x) + y^2 + (y')^2)$$

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Language — the language that built Wolfram Alpha.

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= 
$$y y' + y y'' = y' y''$$
 = solve  $y'(x) = -2 y + x ap...$ 

**=** y'''' + 2 y''' + 3 y''' + 4 ... = solve  $\{y'(x) = -2 \ y, \ y(0)...$  = y" = lambertW(y')

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