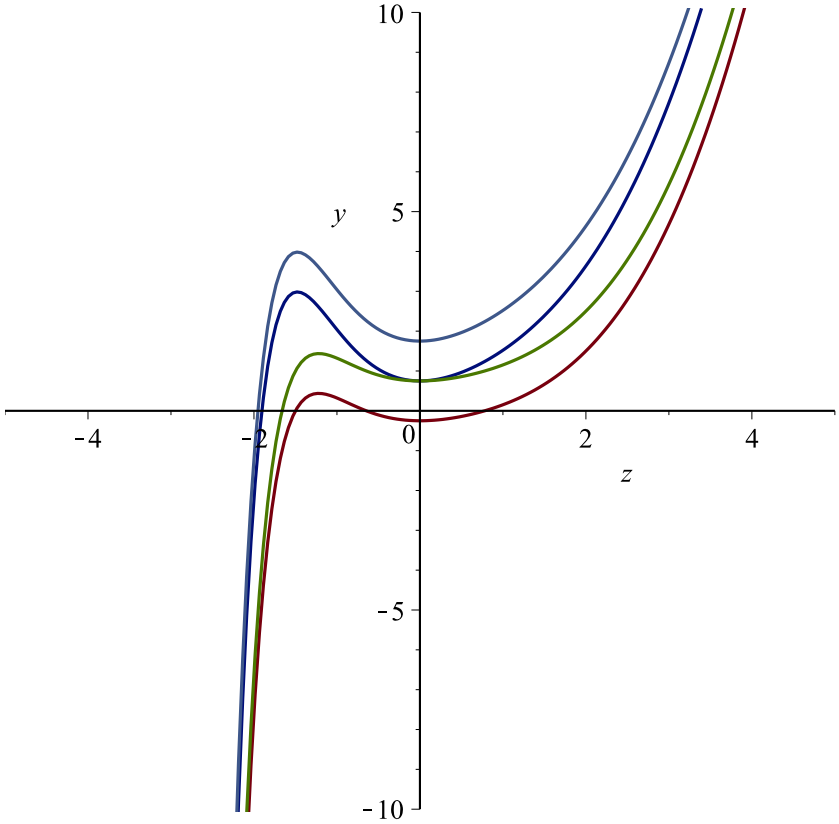
>

$$x = \frac{d^2}{dx^2} y(x) + e^{\frac{d^2}{dx^2} y(x)}$$

$$\frac{1}{6} z^3 + \frac{1}{2} e^{-z} z^2 - e^{-z} + \frac{1}{2} z \left(e^{-z}\right)^2 + \frac{3}{4} \left(e^{-z}\right)^2 + C1\, z + e^{-z} C1 + C2$$



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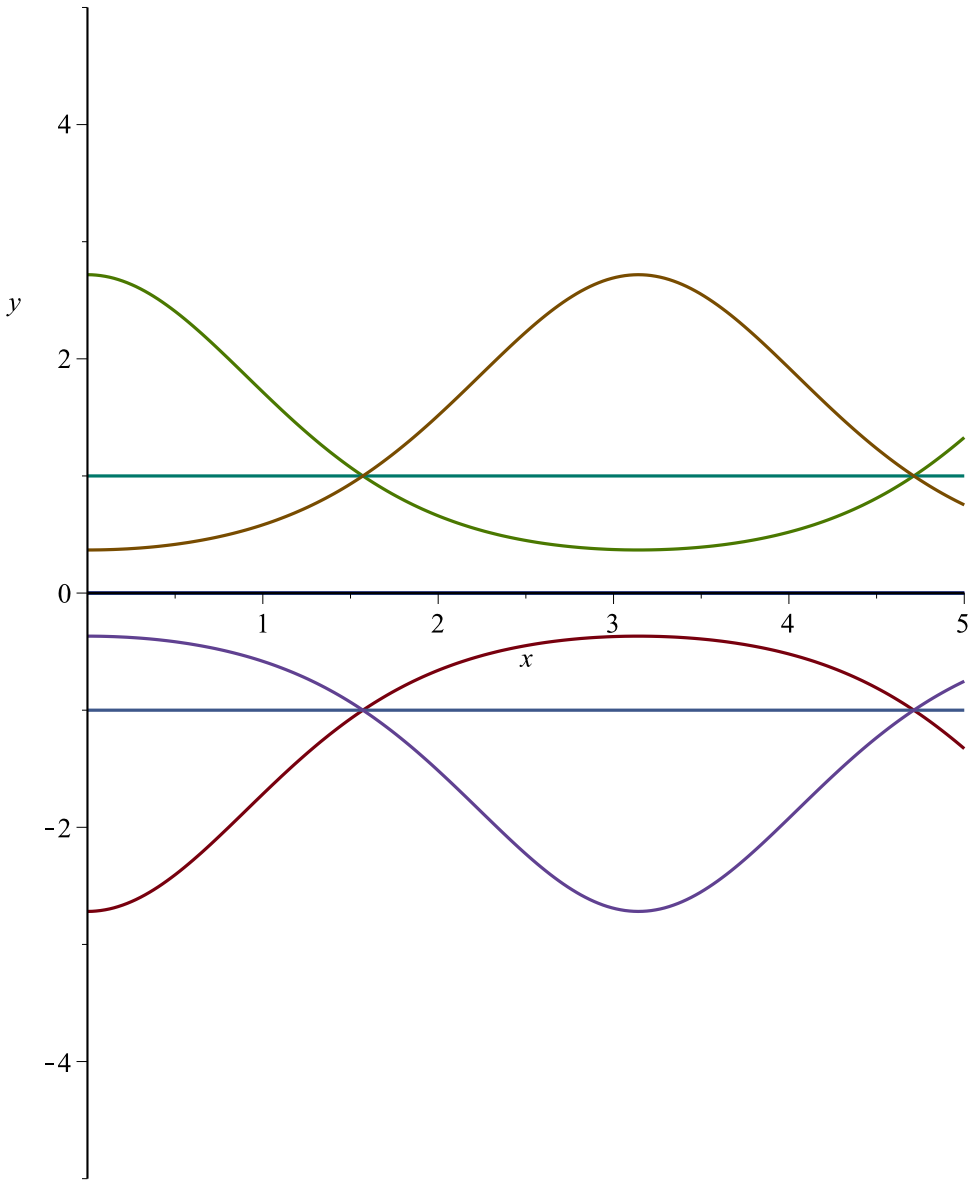
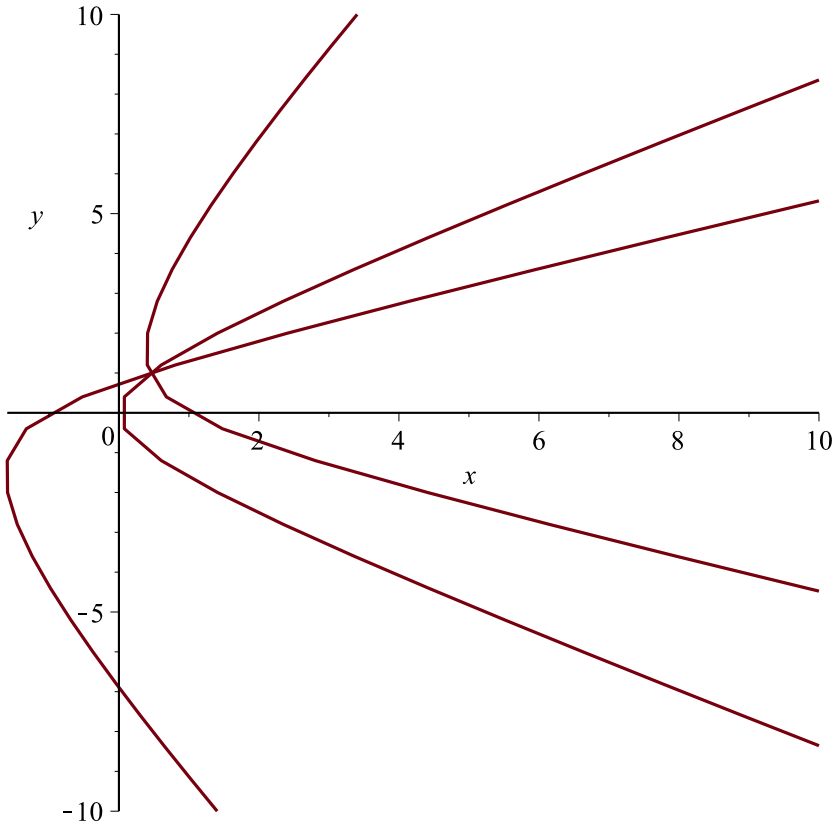
$$y(x) \left(\frac{d^2}{dx^2} y(x) \right) - \left(\frac{d}{dx} y(x) \right)^2 = y(x) \left(\frac{d}{dx} y(x) \right) \cot(x)$$

$$y(x) = \frac{\_C2}{e^{\_C1 \cos(x)}}$$



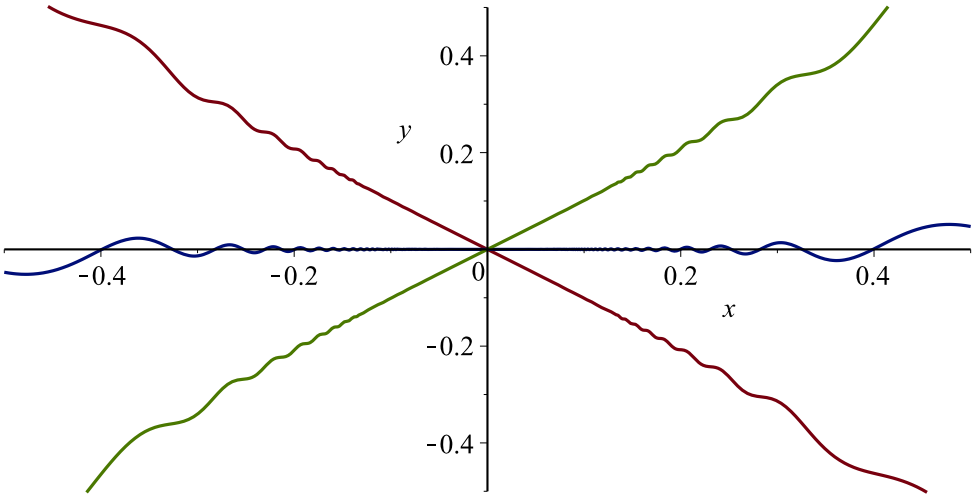
$$\left(\frac{d^2}{dx^2}\,y(x)\right)\left(1+y(x)^2\right) = -\left(\frac{d}{dx}\,y(x)\right)^3$$

$$y(x) = \_C1,\ y(x)\arctan(y(x)) - \frac{1}{2}\ln\left(1+y(x)^2\right) + \_C1\,y(x) - x - \_C2 = 0$$



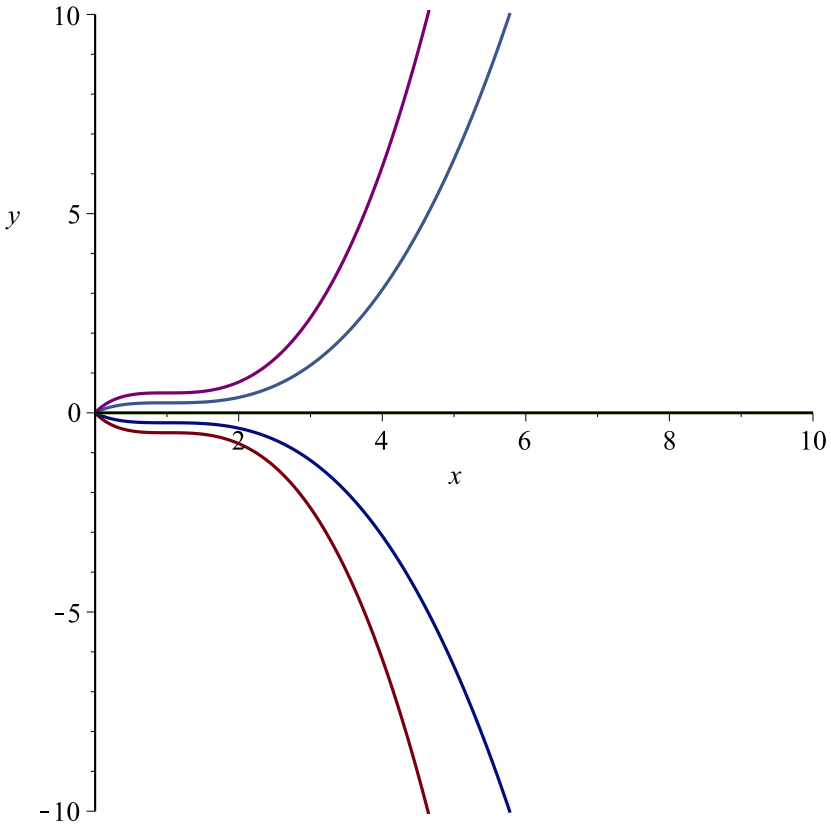
$$\frac{d^2}{dx^2}\,y(x) = \frac{3\left(\frac{d}{dx}\,y(x)\right)}{x} - \frac{3\,y(x)}{x^2} + \frac{2\sin\left(\frac{1}{x^2}\right)}{x^3}$$

$$y(x) = x^3\,\_C2 + \_C1\,x - \frac{1}{2}\,x^3\sin\left(\frac{1}{x^2}\right)$$



$$\left(\frac{d^3}{dx^3}\,y(x)\right) x\ln(x) - \left(\frac{d^2}{dx^2}\,y(x)\right) = 0$$

$$y(x) = \frac{1}{2}\,\_C1\,x^2\ln(x) - \frac{3}{4}\,\_C1\,x^2 + \_C2\,x + \_C3$$



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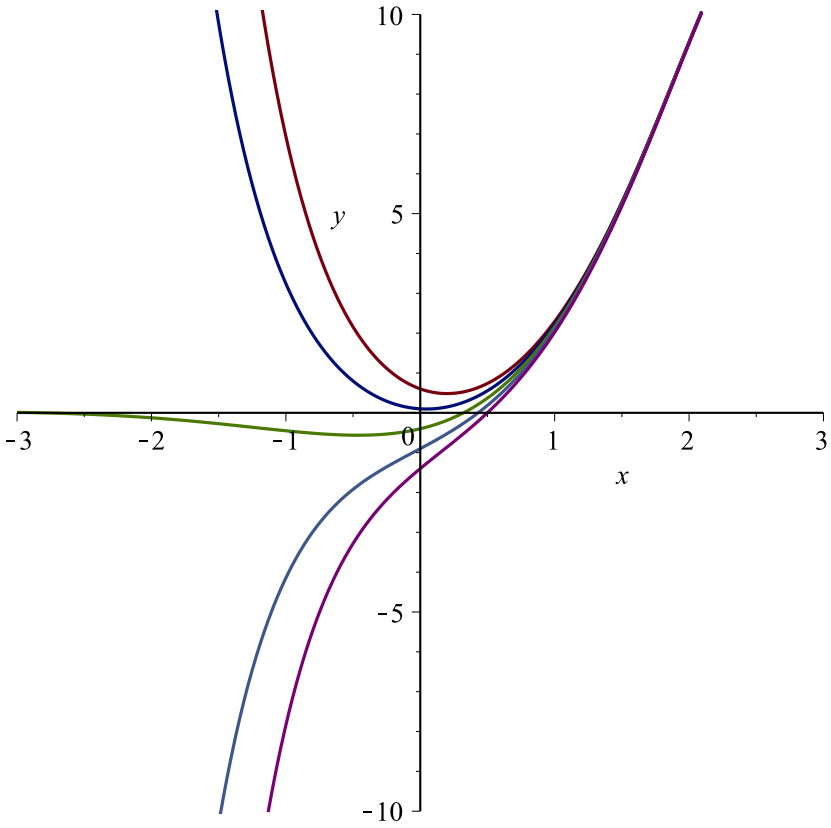
$$\frac{d^2}{dx^2} y(x) + 2\left(\frac{d}{dx} y(x)\right) = 4\, e^{x}\,(\sin(x) + \cos(x))$$

$$y(x) = -\frac{2}{5} e^{x}\cos(x) + \frac{6}{5} e^{x}\sin(x) - \frac{1}{2} e^{-2x}\_C1 + \_C2$$


10
5
y
-3
-2
-1
0
1
2
3
x
-5
-10

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