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[> restart
[> Ecuacion := diff(z(x, y), x$2) + 5·diff(z(x, y), x, y) + 6·diff(z(x, y), y$2) = 0
      Ecuacion :=  $\frac{\partial^2}{\partial x^2} z(x, y) + 5 \left( \frac{\partial^2}{\partial y \partial x} z(x, y) \right) + 6 \left( \frac{\partial^2}{\partial y^2} z(x, y) \right) = 0$  (1)
[> Solucion := pdsolve(Ecuacion)
      Solucion :=  $z(x, y) = \_F1(y - 3 x) + \_F2(y - 2 x)$  (2)
[> Ecua := diff(y(x, t), t$2) = 8·diff(y(x, t), x)
      Ecua :=  $\frac{\partial^2}{\partial t^2} y(x, t) = 8 \left( \frac{\partial}{\partial x} y(x, t) \right)$  (3)
[> Sol := pdsolve(Ecua)
      Sol := (y(x, t) =  $\_F1(x) \_F2(t)$ ) &where  $\left[ \left\{ \frac{d}{dx} \_F1(x) = \_c1 \_F1(x), \frac{d^2}{dt^2} \_F2(t) \right. \right.$ 
      =  $8 \_c1 \_F2(t) \left. \right\} \Big]$  (4)
[> with(PDEtools) :
[> SolGral := build(Sol)
      SolGral :=  $y(x, t) = \_C1 e^{-c_1 x} \_C2 \left( e^{\sqrt{2} \sqrt{-c_1} t} \right)^2 + \frac{\_C1 e^{-c_1 x} \_C3}{\left( e^{\sqrt{2} \sqrt{-c_1} t} \right)^2}$  (5)
[>
[>
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[>

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