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[> restart
[> Ecuacion := diff(y(x), x$3) + 9·diff(y(x), x$2) + 26·diff(y(x), x) + 24·y(x) = 0
      Ecuacion :=  $\frac{d^3}{dx^3} y(x) + 9 \left( \frac{d^2}{dx^2} y(x) \right) + 26 \left( \frac{d}{dx} y(x) \right) + 24 y(x) = 0$  (1)
[> Soluciongeneral := dsolve(Ecuacion)
      Soluciongeneral :=  $y(x) = \_C1 e^{-4x} + \_C2 e^{-2x} + \_C3 e^{-3x}$  (2)
[> restart
[> SolucionGeneral := y(x) = C1·exp(x) + C2·exp(5 x) + C3·exp(-2 x)·C4·exp(-3 x) + C5
      ·exp(-6 x)
      SolucionGeneral :=  $y(x) = C_1 e^x + C_2 e^{5x} + C_3 e^{-2x} C_4 e^{-3x} + C_5 e^{-6x}$  (3)
[> EcuacionCaracteristica := expand((m - 1)·(m - 5)·(m + 2)·(m + 3)·(m + 6)) = 0
      EcuacionCaracteristica :=  $m^5 + 5 m^4 - 25 m^3 - 125 m^2 - 36 m + 180 = 0$  (4)
[> EcuacionDiferencial := diff(y(x), x$5) + 5·diff(y(x), x$4) - 25·diff(y(x), x$3) - 125
      ·diff(y(x), x$2) - 36·diff(y(x), x) + 180·y(x) = 0
      EcuacionDiferencial :=  $\frac{d^5}{dx^5} y(x) + 5 \left( \frac{d^4}{dx^4} y(x) \right) - 25 \left( \frac{d^3}{dx^3} y(x) \right) - 125 \left( \frac{d^2}{dx^2} y(x) \right)$  (5)
      - 36  $\left( \frac{d}{dx} y(x) \right) + 180 y(x) = 0$ 
[> SolGral := dsolve(EcuacionDiferencial)
      SolGral :=  $y(x) = \_C1 e^{-3x} + \_C2 e^{-2x} + \_C3 e^x + \_C4 e^{-6x} + \_C5 e^{5x}$  (6)
[>
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