

```

[> restart
[> Ecua := y''-4·y'+3·y=8·exp(2·x)
      Ecua :=  $\frac{d^2}{dx^2} y(x) - 4 \frac{d}{dx} y(x) + 3 y(x) = 8 e^{2x}$  (1)
[> CondIni := y(0)=4, D(y)(0)=-3
      CondIni :=  $y(0)=4, D(y)(0)=-3$  (2)
[> with(inttrans) :
[> EcuaTL := subs(CondIni, laplace(Ecua, x, s))
      EcuaTL :=  $s^2 \mathcal{L}(y(x), x, s) + 19 - 4s - 4s \mathcal{L}(y(x), x, s) + 3 \mathcal{L}(y(x), x, s) = \frac{8}{s-2}$  (3)
[> SolPartTL := simplify(isolate(EcuaTL, laplace(y(x), x, s)))
      SolPartTL :=  $\mathcal{L}(y(x), x, s) = \frac{4s^2 - 27s + 46}{s^3 - 6s^2 + 11s - 6}$  (4)
[> SolPart := invlaplace(SolPartTL, s, x)
      SolPart :=  $y(x) = -8 e^{2x} + \frac{e^{3x}}{2} + \frac{23 e^x}{2}$  (5)
[>

```