Maple Project 13

Directions. This project is due in class on Tuesday, April 25, 2000 and will be attached to Quiz 13. Please prepare your project by modifying the given instructor provided templates.

1. Solve the following initial value problem using Laplace transforms. Plot your solution for $0 < t < 2$.

\[ y'' - 4y' + 5y = 4e^{3t}; \quad y(0) = 2, \quad y'(0) = 7. \]

2. Solve the following initial value problem using Laplace transforms. Plot your solution for $0 < t < 4$.

\[ y'' - y = g(t); \quad y(0) = 1, \quad y'(0) = 2, \]

where

\[ g(t) = \begin{cases} 
  t, & t < 2 \\
  2, & t > 2.
\end{cases} \]