

1. Take the initial-value problem $\frac{d^2y}{dt^2} + 6\frac{dy}{dt} + 25y = \delta_3(t)$, $y(0) = 1$, $y'(0) = 0$. Determine the solution to this using previous methods for $0 \leq t < 3$ and graph both $y(t)$ and $v(t)$. Then use Laplace Transforms to solve the differential equation and graph both $y(t)$ and $v(t)$.