MATH 253 WORKSHEET WEEK 14

This does **not** count for marks.

1. Solve the equation $y'' - 3y' + 5y = 37\sin(2x)$.

2. Find the general solution of the equation $y'' + 3y' - 5y = 13e^{-3x}$.

3. Solve the equation $y'' - 6y' + 9y = 2e^{3x}$ with initial conditions $y(0) = 1$, $y'(0) = 0$.

4. Find the general solution of the equation $y'' + 2y' + 10y = 85\cos x$ with initial conditions $y(0) = 0$, $y'(0) = 2$.

5. Find the general solution of the equation $y'' + 3y' + 2y = 2 - 10\sin x$ with initial conditions $y(0) = 0$, $y'(0) = 1$.

6. Find the general solution of the equation $y'' - 3y' + 2y = 2 + 10e^x$ with initial conditions $y(0) = 0$, $y'(0) = 1$.