MA 226 Worksheet
Second order equations (3)

Find the general solution to the following second order linear differential equations:
1.) $y'' - 2y' + y = 0$
2.) $y'' + 3y' + \frac{9}{4}y = 0$
3.) $2y'' + 5y' + \frac{25}{8}y = 0$
4.) $-y'' + y' - \frac{1}{4}y = 0$
5.) $y'' + 36y' + 81y = 0$

Find the solutions to the following initial value problems and graph their solutions:
6.) $y'' - 2y' + y = 0$, $y(0) = 0$, $y'(0) = 1$.
7.) $y'' + 3y' + \frac{9}{4}y = 0$, $y(0) = 1$, $y'(0) = -2$.
8.) $2y'' + 5y' + \frac{25}{8}y = 0$, $y(1) = 0$, $y'(1) = 3$.
9.) $y'' + 36y' + 81y = 0$, $y(0) = 3$, $y'(0) = 4$.