

Name:

1. (3pts) Solve the boundary-value problem $y'' - 4y' + 4y = 0$, $y(0) = 1$, $y(1) = e$.

2. (3pts) Use the method of undetermined coefficients to find the general solution for $y'' - 4y' + 4y = e^{2x}$.

3. (4pts) Use variation of parameters to find the general solution for $y'' + y = \frac{1}{\sin x}$.