CALCULUS II
SPRING 2011

ASSIGNMENT 8.3
DUE OCTOBER 17

1 - 4: Solve the differential equation or initial value problem.

Exercise 1. $y'' - y' = xe^x$, $y(0) = 2$, $y'(0) = 1$

Exercise 2. $y'' + 2y' + y = xe^{-x}$

Exercise 3. $y'' + y = \sec^2 x$

Exercise 4. $y'' + 3y' + 2y = \sin(e^x)$

5 - 7: Write a trial solution for the method of undetermined coefficients. Do not determine the coefficients.

Exercise 5. $y'' + 9y' = 1 + xe^{9x}$

Exercise 6. $y'' + 3y' - 4y = (x^3 + x)e^x$

Exercise 7. $y'' + 2y' + 10y = x^2 e^{-x} \cos 3x$