

# Math 3213 - Differential Equations

Homework #9 - 2007.03.23

Due Date - 2007.04.02

Name: \_\_\_\_\_

---

For each of the following problems, only guess what the particular solution would be, do not solve!

1.  $2y'' + 2y' + 3y = x^2 + 2x - 1$

2.  $y'' - 4y' + 4y = x^3e^{2x} + xe^{2x}$

3.  $y''' - 4y'' + 3y' = x^2$

4.  $y^{(6)} - y^{(4)} = x^2$

Solve the following differential equations.

5.  $y''' - 2y' + 4y = x^4 + 3x^2 - 5x + 2$

6.  $y^{(4)} + 2y''' - 3y'' = x^2 + 3e^{2x} + 4\sin(x)$