Lesson #1  MAP 2302 - 69870  Wed 5.6.2009

1. ODE — Ordinary Differential Equation

A. Example: \( y' = 3x \)

   What is \( y \)?  \( y = \frac{3}{2} x^2 + C \)

   This is the "solution"

B. What if I told you that \( y_1 = 4e^{3x} \)

   is a solution to

   \[ y'' - 2y' - 3y = 0 \]  \((*)\)

   Do you believe me? How would you know?

   Ans: Verify it! — So far tomorrow verify that

   \( y_1 = 4e^{3x} \) is a solution of eq \((*)\).