## **Part I Problems**

## Problem 1:

Find the solution satisfying the initial conditions:

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

**Problem 2:** Find a particular solution to the DE

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

**Problem 3:** Find a particular solution to the DE

$$y^{(3)} + 4y' = 3x - 1$$

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18.03SC Differential Equations Fall 2011

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