

**July 22, 2015**  
**Math 201, Tutorial 8**

- 1) Use the Laplace Transform to solve the following initial-value problem.

$$y'' + 2y' + y = \delta(t - 1), \quad y(0) = 0, \quad y'(0) = 0$$

- 2) Use the Laplace Transform to solve the following integrodifferential equation

$$\frac{dy}{dx} + 6y + 9 \int_0^t y(\tau) d\tau = 1, \quad y(0) = 0$$

and verify that the your solution satisfies the equation.