Math 352 **Workshop 08**

April 2, 2014 Name: _____

Variation of parameters

1. Use variation of parameters to find the general solution of the equation

$$y'' - y' - 2y = e^{3t}.$$

2. Use variation of parameters to find the general solution of the equation

$$y'' - 4y' + 5y = e^{-4x}.$$

3. Verify that $y_1 = t^2$ and $y_2 = t^{-1}$ are solutions of the equation

$$t^2 y'' - 2y = 0.$$

4. Use variation of parameters to find the general solution of the equation

$$t^2 y'' - 2y = 3t^2 - 1.$$

You can assume $t > 0$ wherever necessary.