Quiz #8 **Name:**_____

MA 238-02 3/6/09

1. Find the general solution of the equation

$$x^2y'' - 2xy' - 4y = 0.$$

2. Verify that $y(x) = 5x$ is a solution of the equation

$$x^2y'' - 2xy' - 4y = -30x.$$

3. Find the solution to the initial value problem

$$x^2y'' - 2xy' - 4y = -7x, \qquad y(1) = 5, \quad y'(1) = 1.$$