Homework 6 (MATH 2310-04)   **Name (Print):**
Due date: Thursday, March 27, 2014

1. Use the method of reduction of order to find a second solution of the given differential equation.

   $t^2 y'' - 4ty' + 6y = 0, \quad t > 0 \qquad y_1(t) = t^2.$

2. Use the method of reduction of order to find a second solution of the given differential equation.

   $t^2 y'' + 3ty' + y = 0, \quad t > 0 \qquad y_1(t) = t^{-1}.$

3. Use the method of reduction of order to find a second solution of the given differential equation.

   $t^2 y'' + ty' + (t^2 - 0.25)y = 0, \quad t > 0 \qquad y_1(t) = t^{-1/2} \sin(t).$