MATH 420 Name: _____
Worksheet 8

1. Use $x = e^t$ to change transform the Cauchy-Euler equation to a D.E. with constant coefficients. Solve the equation.

$$x^2y'' + 10xy' + 8y = x^2$$

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2. Find the singular points and classify them as irregular or regular. Show work and/or justifications for your answers.

$$x^3(x^2-25)(x-2)^2y'' + 3x(x-2)y' + 7(x+5)y = 0$$