QUIZ 5 - MATH 310 Friday, February 26

YOUR NAME:_____ George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Solve the initial value problem

$$y'' - 4y' + 29y = 0, \quad y(0) = 5, \quad y'(0) = 0.$$

Please, express your answer in terms of real-valued functions.

2. Find the general solution of the differential equation

$$y'' + 10y' + 25y = 3\cos(2t).$$

Please, write a short sentence before each stage of your solution process to explain what you will be doing next.