

QUIZ 4 - MATH 310

Thursday, February 22

YOUR NAME: _____

George Voutsadakis

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

1. [6 points] Find the general solution of the non-homogeneous second order linear differential equation

$$y'' - 4y' - 5y = e^{-t} \sin t.$$

2. [6 points] Find the particular solution of the initial value problem

$$y'' + 6y' + 9y = 10e^{-3t}, \quad y(0) = \frac{7}{3}, \quad y'(0) = 4.$$