

QUIZ 2 - MATH 310

Thursday, January 23

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

$$t \frac{dy}{dt} + 3y = \frac{4}{t} e^{-2t}.$$

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

$$x + ye^{-x}y' = 0, \quad y(0) = -2.$$

(**Hint:** First, replace y' by $\frac{dy}{dx}$. Then separate variables.)