

## MATH 3430-02 QUIZ 1

Name: \_\_\_\_\_

Solve the following initial value problems:

1.  $(1 + t^2) \frac{dy}{dt} + 2ty = 2t, \quad y(1) = \frac{1}{2}.$

(If you are using any formula, be careful when you identify the functions such as  $a(t)$  and  $b(t)$ .)

2.  $\frac{1}{1 + 2t^2} \frac{dy}{dt} = \frac{t}{e^y}, \quad y(0) = 1.$