

## Quiz 4

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

1) Does the function  $y = x^2$  satisfy the differential equation  $y' = x + y$ ?

2) Solve the differential equation  $y' = x(y^2 + 1)$ .

3) Solve the initial value problem  $y' + y = 1$ ,  $y(0) = 2$ .