

Math 202 (081)**Quiz 1 (1.1-2.2)**

Name: _____

ID #: _____

Section #: 01

1. For each given ODE in the table, state the order and linearity.

	ODE	Order	Linear
a.	$y' + \sin x = y$		
b.	$y y' + y^3 = x^5$		
c.	$\frac{d^4 y}{dx^4} + \frac{d^2 y}{dx^2} = e^x$		

2. Does the following IVP have a unique solution? Why?

$$xy' = 3\sqrt{y}$$

$$y(1) = 2$$

3. Solve: $y' + 2xy^2 = 0$. Find singular solutions if they exist.