

Math 202-112

Quiz 2

(A)

Name:.....ID#:.....Sec#.....Ser#.....

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**Q.1:** Solve the initial value problem  $y^2 dx - 2(xy + y^4) dy = 0$ ,  $y(1) = 1$ . (Hint: check if it is linear in  $x$  or in  $y$ )

**Q.2:** Solve the differential equation  $\frac{dy}{dx} + \frac{\sin^2 y}{\sec^2 x} = 0$ .

**Q.3:** Solve the differential equation  $(3x^2 + 2y^2)dx + (2xy)dy = 0$