Quiz 5

MATH 222-004

Name: _____

For full credit please explain all of your answers. **No calculators** are allowed.

Problem 1. Solve the following initial value problem [**4.5 points**] and indicate which, if any, solutions were lost while separating variables [**.5 points**].

$$\frac{dy}{dx} = xy$$

With initial value $y(2) = 1$.

Problem 2. Find the general solution to the differential equation.

$$\frac{dy}{dx} + 1 + y^2 = 0$$