

**MATH 361 Quiz 2****Name:**

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Show all work. 5 points each.

1. Solve the exact initial value problem. You do not have to solve for  $y$  explicitly.

$$(x + y)^2 dx + (2xy + x^2 - 1) dy = 0, \quad y(1) = 1$$

2. Solve the Bernoulli Equation

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