

MATH 361 Quiz 2**Name:**

Show all work. 5 points each.

1. Show that the equation $(x - y^3 + y^2 \sin x)dx = (3xy^2 + 2y \cos x)dy$ is exact and solve it implicitly.

2. Solve the Bernoulli equation

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