Math 216 - Quiz 2

September 8, 2010

Name _____

Score _____

Show each step to receive full credit. Supply explanations when necessary.

1. (3 points) Problem #8, Page 16

2. (2 points) Solve the following Bernoulli equation:

$$x' = \frac{1}{t}x + \sqrt{x}$$

3. (3 points) Solve:

$$\left(\frac{1}{x} + 2y^2x\right) dx + (2yx^2 - \cos y) \, dy = 0, \quad y(1) = \pi$$

4. (2 points) Solve:

$$\frac{dy}{dx} + \frac{3y}{x} + 2 = 3x, \quad y(1) = 1$$