Name: _____

ID No:

1. (10 points) Solve the following initial value problem:

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

2. (7 points) Solve the following initial value problem:

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