Name: _____ ID No: _____

1. (8 points) Solve the following initial value problem:

 $y' - 4y = e^{4x}, \quad y(0) = 2.$

 $2. \ (12 \ {\rm points})$ Solve the following Bernoulli equation:

$$x^2y' + 2xy - y^3 = 0, \quad x > 0.$$