

Math 2260 Quiz 6.5 (Practice)

Name _____

Points will be deducted for untidy or disorganized answers

1. (2.5 points) Solve the differential equation

$$\frac{dy}{dx} = 2kxy, \quad y(0) = 2, \quad y(1) = 4$$

and find the value of x for which $y(x) = 100$.

2. (2.5 points) Solve the differential equation

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

subject to the initial condition $y(0) = 1$.