

Name: _____

This quiz covers: 7.1 and 7.2

Directions: Complete all questions and **show all applicable work**. Partial credit will be given.

1.) Verify $y = e^{2t}$ is a solution to the differential equation $\frac{d^2y}{dt^2} - 3\frac{dy}{dt} + 2y = 0$ by plugging it into the differential equation. Clearly show all steps to receive credit.

2.) Create a direction field for the differential equation

$$\frac{dy}{dx} = y - 1$$

and plot three solutions, one each from $(0, 0)$, $(0, 1)$, and $(0, 2)$