

QUIZ 3 FOR CALC 4

Name: _____ RUID: _____

(1) (−8 pt if not answered) Fill in the blanks above.

(2) (4 pt) Find the maximal interval where the linear equation

$$y'(t) + \frac{t-1}{|t-1|}y(t) = \frac{t}{(t-2)(t-3)}$$

is guaranteed to have a unique solution.

(3) (4 pt) Can you conclude if

$$\begin{cases} y'(t) = \sqrt{y+t-1}, \\ y(0) = 1 \end{cases}$$

has a unique solution on *some* interval of the t -line, around the initial time?