Math 3280 Worksheet 3

Group members (2 to 4): _____

Only hand in one sheet per group.

(1) For the initial value problem $\frac{dy}{dt} = 3y^{2/3}t$, $y(1) = 1$:
   (a) Find a solution to the IVP.
   (b) Determine the largest interval of t values on which your solution from (a) is defined.
   (c) Does it have a unique solution? Check if the conditions of the Picard existence/uniqueness theorem apply.

(2) Repeat the above problem, but this time with an initial value $y(1) = 0$.