Math 10A
Quiz 8; Friday, 7/27/2018
Time: 3 PM
Instructor: Roy Zhao **Name:** _____

Circle True or False. (1 point for correct answer, 0 if incorrect)

1. True False It is possible for a BVP to have exactly 2 solutions.

2. True False If we can use both integrating factors and separable equations to solve a differential equation, we must be able to write it in the form $\frac{dy}{dt} = (ay + b)f(t)$.

Show your work and justify your answers. Please circle or box your final answer.

3. (10 points) (a) (5 points) Find a second order linear homogeneous recurrence relation such that $a_n = 2^n + 3 \cdot 4^n$ is a solution to it.

(b) (5 points) Solve the differential equation $y' = e^t + y$ with $y(0) = 1$.