Math 240 - Quiz 10

Name _____

November 16, 2023

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (5 points) Use Laplace transforms to solve the IVP. You may use a computer algebra system for any partial fraction decompositions.

$$y'' + 4y' + 6y = 1 + e^{-t}, \quad y(0) = 0, \ y'(0) = 0$$

2. (5 points) Use Laplace transforms to solve the system of equations.

$$x' = -x + y, \quad x(0) = 0$$

$$y' = 2x, \quad y(0) = 1$$