

Quiz 12

MATH 2280, ORDINARY DIFFERENTIAL EQUATIONS, SPRING 2024

NAME:

A#:

Problem 1. Exercise 28.4b (10 points) Solve the following initial value problem using the Laplace transform.

$$y'' + 9y = 0,$$

with $y(0) = 4$ and $y'(0) = 4$.

Solution:

Problem 2. Exercise 29.5b (10 points) For the following initial value problem find the corresponding transfer function, $H(s)$, and the impulse response function, $h(t)$, and write down the corresponding convolution integral for the solution.

$$y'' - 4y = f(t)$$

with $y(0) = 0$ and $y'(0) = 0$.

Solution: