Practice Quiz 7 Math 2280, Ordinary Differential Equations, Fall 2023

Name: A#:

Problem 1. Chapter 13 Ex. 13.4c Solve the following initial value problem.

$$y'' = y'$$

with $y(0) = 8$ and $y'(0) = 5$.

Solution:

Problem 2. Chapter 14.2d (10 points) For the following, first verify that y_1 is a solution to the differential equation then find the general solution using y_1 with the method of reduction of order.

$$2\, x^2\, y'' - x\, y' + y = 0, \quad x > 0, \quad y_1(x) = x$$

Solution: