

Math 204 Homework 3.

Problems from W.E. Boyce, R.C. Diprima, D.B. Meade

Section 2.8, p.89: Problems: 5, 7, 11, 14.

Section 3.1, p.107: Problems: 4, 6, 14, 15.

and the following problem:

Problem 1. Show that the problem

$$\begin{cases} y'(t) + e^t y^5(t) = 0, \\ y(0) = 4 \end{cases}$$

has at most one solution and

$$|y(t)| \leq 4, \quad t > 0.$$