

MAP 2302 Homework 4.2

Problem 1. Find a general solution to the given differential equation.

$$y'' + 5y' - 36y = 0$$

Solution.

$$r^2 + 5r - 36 = 0$$

$$(r + 9)(r - 4) = 0$$

$$r_1 = -9, r_2 = 4$$

$$y(t) = c_1 e^{-9t} + c_2 e^{4t}$$