

HOMEWORK #9 (M427K FALL 2004)

INTRODUCTION

You are supposed to find the “particular” solution y_p to the following differential equations (NOTE that the full solution to these differential equations would be $y_p + y_c$ where y_c is the solution to the differential equation if the RHS=0!!!).

1. FIND THE PARTICULAR SOLUTION TO THE DIFFERENTIAL EQUATION

$$(D - 3)(D + 4)(D - 6)y(x) = 4e^{5x} + 6e^{7x} + 8e^{-9x}$$

2. FIND THE PARTICULAR SOLUTION TO THE DIFFERENTIAL EQUATION

$$D(D - 1)(D - 2)(D + 6)y(x) = e^{4x} + e^{-4x} + 6e^{\pi x} + 7e^{\sqrt{2}x} + \sum_{n=1}^{1000} e^{7nx}$$