

系級：_____ 學號：_____ 姓名：_____

1. 試以待定係數法求解下述微分方程式：

(1) $y'' - 5y' + 6y = x^3$

(2) $y'' - 2y' = 3x$

(3) $y'' - 6y' + 9y = 8e^{3x}$

(4) $y'' + 4y = \sin 2x$

(5) $y'' + 3y' + 2y = e^{2x} \cos x$

(6) $y'' - 2y' + 2y = 2e^x \sin x$

(7) $y'' + 2y' + y = xe^{2x}$

2. 試以參數變異法求解下述微分方程式：

(1) $y'' - 4y = 8x^2 - 2x$

(2) $y'' + 4y = \tan 2x$

(3) $y'' - 6y' + 9y = x^{-2}e^{3x}$