

系級：\_\_\_\_\_ 學號：\_\_\_\_\_ 姓名：\_\_\_\_\_

試求下述微分方程式：

1. (1)  $y(1+x^2)y' = 3x + xy^2$

(2)  $e^{x+y} \frac{dy}{dx} = 2x$

(3)  $(x \ln x)y' = y$

(4)  $y' = x \csc^2 y$

2.  $xy' = y^2 + y$

3.  $y' = \frac{x^3 + y^3}{3xy^2}$

4.  $(y^2 + 2y + 5)dx - dy = 0$