Engineering Mathematics

Homework 2

1. $y(x) = c_1 e^{5x} + c_2 e^{3x}$, 求原*Differential Equation*為何?

2. 下列何者具唯一解?

1.
$$y' = e^{x^2y}$$
, $y(0) = 1$

2.
$$y' = \sqrt{2-y}, y(0) = 0$$

3.
$$y' = \sqrt{2-y}, y(0) = 2$$

4.
$$y' = \sqrt{4 - y^2}$$
, $y(0) = 2$

CMILAB

3. $Solve: 3x^2ydx + (x^3 - 5)dy = 0$