King Fahd University of Petroleum and Minerals

MATH 202 QUIZ #1 to 5

Quiz #1: Solve

$$(e^y + 1)^2 e^{-y} dx + (e^x + 1)^2 e^{-x} dy = 0$$

Quiz #2: (a) Is the set $\{e^x, e^{-x}, \sin x\}$ linearly independent?
(b) Solve the equation $y''' + 3y'' - 4y = 0$

Quiz #3: (a) Find the annihilator of $f(x) = x^3 - xe^{3x} + \sin(3x) - x^2 e^{2x}\cos(2x)$

(b) Transform (without solving) $x^3 y'' - 3xy' + 4y = 0$ to a DE with constant coefficients.

Quiz #4: Solve the differential equation

$$y'' + 2y' - 8y = 2e^{-2x} - e^{-x}.$$

Quiz #5: Find the interval and the radius of convergence for the series

$$\sum_{k=1}^{\infty} \frac{1}{k^2 + k}(3x - 1)^k.$$