

King Fahd University of Petroleum and Minerals  
Math & Stat. Departement  
Math 202 Quiz (2)

| Name | ID | SEC | Sr |
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Q1) Is the D.E  $(3 + y + 2y^2 \sin^2 x) dx = (-x - 2xy + y \sin(2x)) dy$  Exact? If it is , then solve it.

Q2) Make an appropriate substitution to convert the D.E

$$\frac{dy}{dx} = e^{x+y+1},$$

to separable D.E. Do not solve the new equation.

Q3) Solve :  $y dx - \left( x + y \cot\left(\frac{x}{y}\right) \right) dy = 0$

Q4) Reduce the following D.E into linear. Do not solve it.

$$x y' - 2y = 12 x^3 \sqrt{y}, \quad x \neq 0$$