

NAME:

Home Work 4
MAP 2302 - Differential Equations

Check whether the following DEs are EXACT? If so, the solve:

1. $(2x \sin y + y^3 e^x) + (x^2 \cos y + 3y^2 e^x)y' = 0$

2. $(3x^2 + 4xy) + (2x^2 + 2y)y' = 0$

3. $(2x \cos y + 3x^2 y) + (x^3 - x^2 \sin y - y)y' = 0; y(0) = 2$

4. $(2xy - 3) + (x^2 + 4y)y' = 0; y(1) = 2$

5. $(y \sec^2 x + \sec x \tan x) + (\tan x + 2y)y' = 0$