Handout 8

MATH 140 Lab: Section 1

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Student's Name:--

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Note: This handout covers some of the most important problems about differentiation.

Problem 1: Differentiate the following functions:

Part a: $x^2y^2 + 3y = 4x$

Part b: $xe^y - 3y\sin(x) = 1$

Part c: $e^y - \ln y = 2x$

Part d: $h(x) = x(\sqrt[3]{x} + 3)$

Part e: $g(x) = \frac{x^2-1}{x+x^2}(x+2)$

Part f: $m(x) = x^3 e^{2x}\sin(4x)$

Problem 2: Find the equation of the tangent line to the curve of $x^2y^2 = 4y$ at $(2,1)$.