

Serial No.: _____ Student Name: _____ Student Number: _____
Instructor: M. Z. Abu-Sbeih Math 101- Q3 A Date: 27-12-2008

Problem 1: (6 points) If $y^2 + x^2y = e^x$, find y' at (0,1)

Problem 2: (6 points) If $y = \tan^{-1} \sqrt{x^2 + 1}$, find $\frac{dy}{dx}$.

Problem 3: (7 points) If $\sin xy = x$, find $\frac{d^2y}{dx^2}$ at (0,1).

Problem 4: (6 points) If $y = \sqrt{x-1}$ find $y^{(20)}(2)$.

Serial No.: _____ Student Name: _____ Student Number: _____
Instructor: M. Z. Abu-Sbeih Math 101- Q3B Date: 27-12-2008

Problem 1: (6 points) If $xy^2 + y = e^x$, find y' at (0,1)

Problem 2: (6 points) If $y = \cot^{-1} \sqrt{x^2 + 1}$, find $\frac{dy}{dx}$.

Problem 3: (7 points) If $\cos xy = x$, find $\frac{d^2y}{dx^2}$ at (1,0).

Problem 4: (6 points) If $y = \sqrt{x+1}$ find $y^{(20)}(0)$.