

Student Name: _____ Student Number: _____ Serial No.: _____
Instructor: M. Z. Abu-Sbeih Math - 132.4 Quiz No. 6 Date: 14-1-2008.

Problem 1: (4 points) Find the equation of the plane that is parallel to the x, y -plane and passes through the point $(2,3,4)$.

Problem 2: (6 points) If $f(x, y) = \sin(xy + x^2 - y^2)$, find $f_x + f_y$ at the point $(1,1)$

Problem 3: (10 points) Find all local extrema of the function

$$f(x, y) = 3xy + 2x^2 + \frac{3}{2}y^2 - 10x - 9y + 2$$