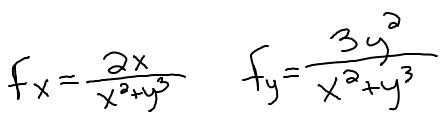
"QUIZ" for Lecture 7

E-MAIL SCANNED .pdf OF COMPLETED QUIZ to DrZcalc3@gmail.com (Attachment: q7FirstLast.pdf) ASAP BUT NO LATER THAN Sept. 28, 8:00pm

1. Compute the partial derivatives with respect to x and y.

 $z = \ln(x^2 + y^3)$ .  $f_x = 1/x^2 + y^3 - 2x$   $f_y = 1/x^2 + y^3 - 3y^2$ 



2. Find an equation of the tangent plane to the given surface at the specified point.

$$z = x^{2} + y^{2} + 2 \quad , \quad (1, 1, 4) \quad .$$

$$4 = [+1+3\sqrt{f_{x}} = \frac{d^{2}}{dx} = \Im \times + \Im + \Im \quad f_{y} = \frac{d^{2}}{dy} = \Im + \Im y + \Im \quad z^{1} = \Im \ z^{1}$$