## "QUIZ" for Lecture 9

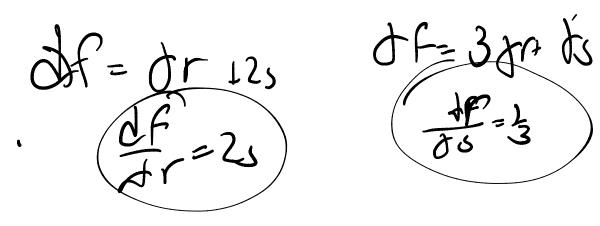
NAME: (print!) Fayed Razu Section: 6

E-MAIL SCANNED .pdf OF COMPLETED QUIZ to DrZcalc3@gmail.com (Attachment: q9FirstLast.pdf) ASAP BUT NO LATER THAN Oct. 5, 8:00pm

1. Find  $\frac{\partial f}{\partial r}$  and  $\frac{\partial f}{\partial s}$  as functions of r and s , if

$$f(x,y) = x^2 + 2xy^2 + 2y^3 \quad ,$$

and the variables are related by x = r + 2s and y = 3r + 2s. You do not need to simplify!



2. Find  $\frac{\partial z}{\partial x}$  and  $\frac{\partial z}{\partial y}$  if  $x^{2} + y^{2} + z^{2} = 5xyz + 1$   $\sqrt{x} 2x + \sqrt{y} 2z = \sqrt{z} 2xy + \sqrt{x} 2zy = \sqrt{x} 2y + \sqrt{z}$   $\sqrt{x} 2x + -1 + \sqrt{z} = \sqrt{z} 2xy - \sqrt{z} 2z$   $\sqrt{x} 2y + \sqrt{z} - 1 = \sqrt{z} 2xy - \sqrt{z}$   $\sqrt{x} 2y + \sqrt{z} - 1 = \sqrt{z} 2xy - \sqrt{z}$   $\sqrt{x} 2y + \sqrt{z} - 1 = \sqrt{x} 2xy - \sqrt{z}$   $\sqrt{x} 2y + \sqrt{z} - 1 = \sqrt{x} 2xy - \sqrt{z}$   $\sqrt{x} 2y + \sqrt{x} 2y + \sqrt{z}$   $\sqrt{x} 2y + \sqrt{x} 2y + \sqrt{z}$   $\sqrt{x} 3y - 2z$   $\sqrt{x} 4y - 2z$   $\sqrt{x} 3y - 2z$   $\sqrt{x} 4y - 2z$   $\sqrt{$