MATH 261 Quiz 5 Name: .
Spring 15

Show all work. 5 points each.

1. Find the linearization, $L(x, y)$, of $f(x, y) = \dfrac{x}{x + y}$ at the point$(2, 1)$.

2. Use the chain rule to find $\dfrac{\partial z}{\partial t}$ and $\dfrac{\partial z}{\partial s}$ if $z = x^2y^3$, $x = s\cos t$ and $y = s\,\sin t$.