

Name:
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MAC 2313.9728
Cyr

Quiz 6

You must show all work to receive full credit!!

Problem 1. (5 points) Find an equation of the tangent plane to $f(x, y) = e^{x^2 - y^3}$ at the point $(1, 1)$, and use it to approximate $f(1.1, 0.9)$.

Problem 2. (5 points) Let $z = \ln(3x + 2y)$, $x = u \sin(v)$, $y = v \cos(u)$. Use the chain rule to evaluate the partial derivative $\frac{\partial z}{\partial u}$ at the point $(u, v) = (0, \pi/2)$.