

MATH 2415 Test 3

Name: _____

1. Starting from the easy $6/\sqrt{4} = 3$, use a tangent plane approximation (also called linear approximation) of $f(x, y) = x/\sqrt{y}$ to estimate $6.04/\sqrt{3.99}$.

2. Given $w = f(z)$ such that $dw/dz = 5$ at $z = 2$ and given $z = g(x, y) = x^2y^3/16$, compute $\partial w/\partial x$ and $\partial w/\partial y$ at the point $(x, y) = (2, 2)$.