

Fake Quiz 2 Calc 3 10/22/2019

This is a fake quiz, this is *only* a fake quiz. In the event of an actual quiz, you'd have been given fair warning. Repeat: This is *only* a fake quiz.

1. Let $f(x,y) = 4x^2 + 9y^2$. Let R be the parallelogram with vertices $(0,0)$, $(2,2)$, $(2,5)$, and $(0,3)$. Set up an iterated integral for $\iint_R f \, dA$.

2. Set up iterated integrals for the center of mass of the first-quadrant portion of a circle with radius 1 and evaluate them.

3. Set up an iterated integral for the volume above $z = \sqrt{x^2 + y^2}$ and below $z = 9$.

4. Set up an iterated integral for the volume above $z = \sqrt{x^2 + y^2}$ and inside $x^2 + y^2 + z^2 = 9$.