

Name:
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MAC 2313.9722
Cyr

Quiz 9

You must show all work to receive full credit!!

Problem 1. (5 points) Use Lagrange multipliers to find the maximum and minimum value of $f(x, y, z) = xyz$ subject to the constraint $x^2 + y^2 + z^2 = 3$.

Problem 2. (5 points) Evaluate by reversing the order of integration:

$$\int_0^1 \int_{\sqrt{x}}^1 \sqrt{y^3 + 1} dy dx$$