

# Math 233 - Quiz 11

April 30, 2026

Name \_\_\_\_\_

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary.

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1. (5 points) Sketch the region of integration, reverse the order of integration, and evaluate the iterated integral.

$$\int_0^8 \int_{\sqrt[3]{x}}^2 \frac{1}{y^4 + 1} dy dx$$

2. (5 points)  $R$  is the region in the first quadrant that lies under the graph of  $x + y = 1$ . Find the average value of  $f(x, y) = xy$  over  $R$ .