

Name:  
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MAC 2313.8443  
Cyr

Quiz 9

You must show all work to receive full credit!!

**Problem 1.** (2 pts) Rewrite the integral by changing the order of integration:  $\int_0^2 \int_{y^2}^{2y} f(x, y) dx dy$ .  
(You may find it helpful to sketch the domain of integration.)

**Problem 2.** (3 pts) Set up the triple integral that would be used to calculate the volume of the region in the first octant ( $x \geq 0, y \geq 0, z \geq 0$ ) satisfying  $2x + y + z \leq 4$ . DO NOT EVALUATE. (You may find it helpful to sketch the domain of integration.)

**Problem 3.** (5 pts) Evaluate by using polar coordinates:  $\iint_{\mathcal{D}} x dA$ , where  $\mathcal{D} = \{1 \leq x^2 + y^2 \leq 4, x \geq 0, y \geq 0\}$ . (You may find it helpful to sketch the domain of integration.)