

MATH 251: Practice 15

June 23, 2015

Name: _____

1. Find the volume of the region in the first octant bounded by the planes $x = 4$, $y = 3$, and $2x - y + z = 10$.

2. Find $\iiint y \, dV$ over the region between the two paraboloids

$$z = 4 - 2x^2 - y^2 \quad \text{and} \quad z = x^2 + y^2$$

Hint: Solve for y as a function of x for the overlapping region, then make y your second integral.