Quiz #10; Wed, 4/6/2016

Math 53 with Prof. Stankova
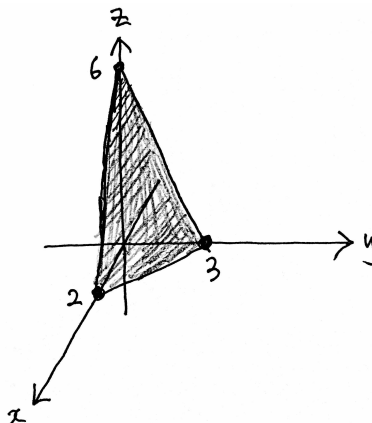
Section 107; MWF10-11

GSI: Christopher Eur

Student Name: _____

Problem. Use triple integral to find the volume of the tetrahedron enclosed by the coordinate planes and the plane $3x + 2y + z = 6$.

Solution. The sketch of the tetrahedron is:

Thus, the integration we set up is:

$$\int_0^2 \int_0^{2-(2/3)y} \int_0^{6-3x-2y} dz\,dy\,dx = 9$$