

**Math 335-002**

**Homework #9B \* Spring 2015 \* Prof. Victor Matveev**

Please show all work in detail to receive full credit. Late homework is not accepted.

1. Calculate  $\iiint_B y \, dV$ , where the volume of integration  $B$  is bounded in by the planes  $z=1-x-2y$ ,  $z=0$ ,  $y=0$  and  $x=y$ . Start by sketching this domain of integration.
2. Use triple integration to calculate the volume enclosed between the surfaces  $z=x+y^2$ ,  $z=0$ , and  $x=-1$ . Start by sketching the domain of integration, and make sure to correctly visualize the surface  $z=x+y^2$ . Hint: the most convenient order of integration is  $dz \, dx \, dy$ .