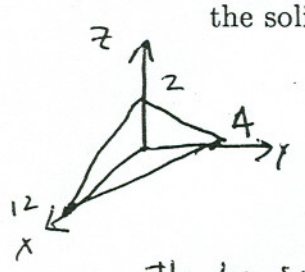
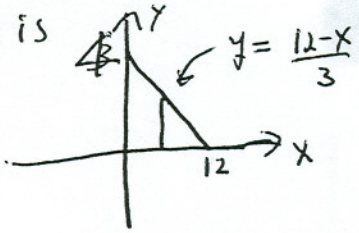
9. Cosider the solid which is bounded by $x+3y+6z=12$ and the three coordinate planes. The density of the solid at the point (x,y,z) is x. Find the mass of the solid.

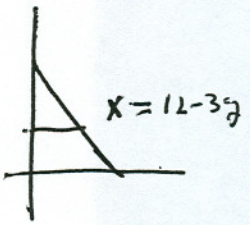


$$\int_0^{12}\int_0^{\frac{12-x}{3}}\int_0^{\frac{12-3y-x}{6}} x \, dz\, dy\, dx$$

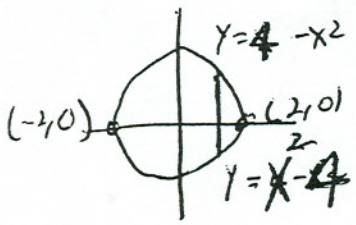
The base is



$$\int_0^{4}\int_0^{12-3y}\int_0^{\frac{12-3y-x}{6}} x \, dz\, dx\, dy$$



10. The base of a solid is the region in the $xy-$ plane which is bounded by $y=4-x^2$ and $y=x^2-4$. The top of the solid is given by $z=x+y+10$. Find the volume of the solid.



$$\int_{-2}^{2}\int_{x^2-4}^{4-x^2} x+y+10 \, dy\, dx$$