# Quiz2

**Question 1**

Find the volume of the region that is below $z = 9 - x^2 - y^2$, above

$z = -\sqrt{3x^2 + 3y^2}$ and inside $x^2 + y^2 = 3$.

**Question 2**

Evaluate the following integral by changing it to cylindrical coordinates

$$\int_0^{\sqrt{6}} \int_{-\sqrt{6-x^2}}^{0} \int_{x^2+y^2-11}^{9-3x^2-3y^2} (3x - 2y) \, dzdydx.$$