1. Identify and sketch a graph of the parametric surface: \( x = u \cos v, \quad y = u \sin v, \quad z = u \)

2. Find a parametric representation of the surface \( x = 4y^2 - z^2 \).

3. Investigate whether \( x = 2 \sin u \cos v, \quad y = 2 \cos u \cos v \) and \( z = 2 \sin u \) are parametric equations for the sphere \( x^2 + y^2 + z^2 = 4 \).
4. Find parametric equations for the region that lies above $z = \sqrt{x^2 + y^2}$ and below $x^2 + y^2 + z^2 = 4$.

5. Sketch the plane with parametric equations

   $x = 2 + u + 2v, \quad y = -1 + 2u - v$ and $z = 3 - 3u + 2v$.

   Show that the points $(2, -1, 3), (3, 1, 0)$ and $(4, -2, 5)$ are on the plane by finding the correct values of $u$ and $v$.

6. Find parametric equations for the plane through the point $(0, -1, 2)$ and containing the vectors $<-2, 4, 0>$ and $<3, -2, 5>$.