Group members (2 to 4): ________________________________

(1) Convert the implicit quadric equation \( z^2 - 2xy = 0 \) into spherical coordinates. If you can, determine what kind of quadric surface this is.

(2) Convert the equation for the sphere \( (x - 1)^2 + y^2 + z^2 = 1 \) into spherical coordinates, and write \( \rho \) as a function of \( \phi \) and \( \theta \).