Q 1. Show that $L_1: x = 1 + t, y = -2 + 3t, z = 4 - t$ and $L_2: x = 2s, y = 3 + s, z = -3 + 4s$ are skew.

Q 2. Identify and sketch the surface: $x^2 + 2z^2 + 10 = 6x + y$. 
Q 1. Find the distance between the line $x = 1 - t, \ y = 2 + t, \ z = 3 - t$ and the plane $3x + y - 2z = 6$.

Q 2. Identify and sketch the surface: $x^2 + 4y^2 = z^2 + 4$. 
Q 1. Find equation of plane through the origin and the points \((2, -4, 6)\) and \((5,1,3)\).

Q2. Identify and sketch the surface: \(36(1 - x^2) = 4y^2 + 9z^2\).