1) Determine whether the lines $L_1$ and $L_2$ are intersecting. If so, find their point of intersection.

$L_1: x = 1 + 4t, \ y = 5 - 4t, \ z = -1 + 5t$
$L_2: x = 2 + 8t, \ y = 4 - 3t, \ z = 5 + t$

2) Identify and draw a rough sketch of the surface $4x^2 + 4y^2 + z^2 + 8y - 4z = -4$
1) Find the distance between the planes:
   \[ 3x - y + 2z = 6 \]
   \[ 6x - 2y + 4z = -4 \]

2) Use traces to sketch graph of the surface \( 16x^2 - 9y^2 + 36z^2 = 144 \).