1. Find a symmetric equation for the line through the points (0, 1, 1) and (2, 1, -3).
   The direction from (0, 1, 1) to (2, 1, -3) is \( \langle 2, 0, -4 \rangle \). Therefore, parametric equations for the line through the two points are
   \[ x = 2t, \quad y = 1, \quad z = 1 - 3t. \]
   Now we solve for \( t \) in each of the equations (except the \( y \) equation since there is not \( t \)) to give \( t = x/2 \) and \( t = (1 - z)/3 \). Thus the symmetric equations are
   \[ x/2 = (1 - z)/3, \quad y = 1. \]

2. Find the equation of the plane through the point (1, 1, -1) and with normal vector \( \langle 1, 2, 3 \rangle \).
   The plane is
   \[ (x - 1) + 2(y - 1) + 3(z - (-1)) = 0 \]
   \[ x + 2y + 3z = 0. \]