1. Find an equation of the plane which contains the line 
\[ \frac{x - 1}{2} = -y = \frac{z + 2}{3} \]
and the point \( P(1, 1, 1) \).

2. Find the intersection point of the line 
\[ \frac{x - 4}{3} = \frac{y - 3}{3} = \frac{z - 1}{-2} \]
and the plane \( 2x - y + z = 4 \).

3. Find the equation of the sphere centered at \( C(-1, 0, 1) \) which is tangent to the plane \( x - y + 2z - 7 = 0 \).

4. Find the equation of the surface consisting of points that are equidistant from the point \((-1, 0, 0)\) and the plane \( x = 1 \). What is the surface?