(1) Find the equation of the plane through the point \((6, 3, 2)\) and perpendicular to the vector \((-2, 1, 5)\).

(2) Find the equation of the plane that contains the points \((0, 1, 1)\), \((1, 0, 1)\), and \((1, 1, 0)\).

(3) Find the point at which the line \(x = y - 1 = 2z\) intersects the plane \(4x - y + 3z = 8\).

(4) Find the angle between the planes \(x + y + z = 0\) and \(x + 2y + 3z = 1\).
(5) Are the following planes parallel, perpendicular or neither? If neither, find the angle between them.

(a) \( x + 4y - 3z = 1, \quad -3x + 6y + 7z = 0 \)

(b) \( x + y + z = 1, \quad x - y + z = 1 \)

(c) \( x = 4y - 2z, \quad 8y = 1 + 2x + 4z \)

(6) Find the distance between the planes: \( 2x - 3y + z = 4 \) and \( 4x - 6y + 2z = 3 \).

(7) Find the parametric equations for the line of intersection of the planes \( 5x - 2y - 2z = 1 \) and \( 4x + y + z = 6 \).