Q.1: Determine if the lines are parallel, intersection or skew, x = 1 + t, y = -2 + 3t, z = 4 - t

and x = 2s, y = 3 + s, z = -3 + 4s.

Q.2: Find cosine of the angle between the planes 2x - 3y + z = 1 and 3x + y - 2z = 4.

Q.3: Find parametric equations of the line of intersection of the planes 2x - 3y + z = 1 and 3x + y - 2z = 4. Also find a plane passing through the point (1, 2, 3) and contains the line of intersection.