1. Find an equation of the plane that contains both of the following parametrized lines. (You may assume that the two lines intersect.)

\[ r_1(t) = \langle 3 - 2t, 1 + t, 4t \rangle \]
\[ r_2(t) = \langle 1 + 2t, 2 - t, 4 + t \rangle \]

equation of plane: ____________________________

2. Determine whether these two planes are perpendicular to each other. Justify your answer.

\[ 2x - 3y + 5z = 4 \quad , \quad x + 2y - z = -3 \]

perpendicular? ____________________