Exercise 1 *Find the point at which the line*

$$x = 1 - t \quad , \qquad y = 3t \quad , \quad z = 1 + t$$

meets the plane

$$2x - y + 3z = 6$$

.

Exercise 2 *Find parametrization for the line along which the planes*

$$2x + y - z = 2 \qquad , \qquad x + 2y = 1$$

meet.

Exercise 3 *Find the distance from the point $P(1, 2, 3)$ to the plane*

$$x + y + z = 3$$