

3 09-02-2025

3.1 Section 2.5, Checkpoint 2.45

Find the distance between point $(0, 3, 6)$ and the line with parametric equations

$$x = 1 - t, y = 1 + 2t, z = 5 + 3t$$

3.2 Section 2.5, Checkpoint 2.46

Describe the relationship between the lines with the following parametric equations:

$$x = 1 - 4t, y = 3 + t, z = 8 - 6t$$

$$x = 2 + 3s, y = 2s, z = -1 - 3s$$

3.3 Section 2.5, Checkpoint 2.47

Find an equation of the plane containing the lines L1 and L2:

$$L1 : x = -y = z$$

$$L2 : \frac{x-3}{2} = y = z-2$$

On the original handout, I mistyped and had $L_2 = x - 32$. This has been corrected, as the error makes the question unsolvable since the lines would be skew.

3.4 Section 2.5, Checkpoint 2.48

Find the distance between point $P = (5, -1, 0)$ and the plane given by $4x + 2y - z = 3$.