

**Full Name:**

**Student Number:**

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**QUIZ 3**

Consider the intersecting lines

$$L_1 : x = t, \quad y = 3 - 3t \quad z = -2 - t, \quad -\infty < t < \infty$$

$$L_2 : x = 1 + s, \quad y = 4 + s, \quad z = -1 + s \quad -\infty < s < \infty$$

(a) (2 pts) Write two vectors  $\mathbf{v}_1$  and  $\mathbf{v}_2$  which are parallel to  $L_1$  and  $L_2$ , respectively.

(b) (3 pts) Calculate the cross-product  $\mathbf{v}_1 \times \mathbf{v}_2$ .

(c) (5 pts) Write an equation of the plane containing the lines  $L_1$  and  $L_2$ .