Problem 9. (10 pts) Find the acute angle between between the planes $x + y = 1$ and $y + z = 1$.

NORMAL VECTORS: $\vec{u} = \langle 1, 1, 0 \rangle$

$\vec{v} = \langle 0, 1, 1 \rangle$

$$\theta = \arccos\left(\frac{\vec{u}\cdot\vec{v}}{|\vec{u}||\vec{v}|}\right) = \arccos\left(\frac{1}{\sqrt{2}\sqrt{2}}\right)$$

$$= \arccos\left(\frac{1}{2}\right) = \boxed{\frac{\pi}{3}}$$

Problem 10. (10 pts) Find the point where the line L_1 of Problem 8 meets the plane $x + y - 2z = -3$.

$$(2t+1) + (3t+2) - 2(4t+3) = -3$$

$$-3t - 3 = -3$$

$$-3t = 0$$

$$t = 0 \rightarrow \boxed{(1,2,3)}$$