

9. Find the equations of any line which is contained on the plane  $x+2y+3z=6$ .

The line which connects  $(6, 0, 0)$  and  $(0, 3, 0)$  will do

It is

$$\begin{cases} x-6 = -6t \\ y = 3t \\ z = 0 \end{cases}$$

There are many other answers.

10. Find the equations of any plane which contains the line

$$\begin{cases} x = 1 + 2t \\ y = 3 - t \\ z = 4 - 3t \end{cases}$$

I'll record the plane which contains  $(1, 3, 4)$  and is

$\perp \vec{L} + 2\vec{J}$

(Notice that  $(\vec{L} + 2\vec{J}) \cdot (2\vec{C} - \vec{J} - 3\vec{K}) = 0$ ,

$$x - 1 + 2(y - 3) = 0$$

$$x + 2y = 7$$

There are many other answers.