



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

$\perp \quad \vec{r} + 2\vec{j}$

(Notice that  $(\vec{r} + 2\vec{j}) \cdot (2\vec{r} - \vec{j} - 3\vec{k}) = 0$ .)

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

$$x + 2y = 7$$

There are many other answers.