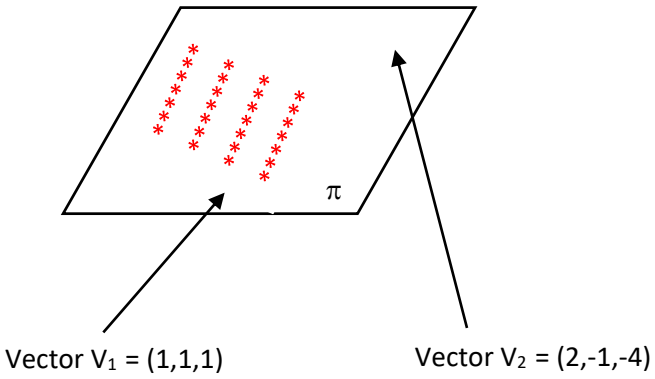
Plane and Vectors

π : (0,0,4) + t(1, 1,1) + s(2,-1,-4)



A plane π is defined by 2 vectors and point B(0,0,4)

Find π = AX + BY + CZ = D

$$\begin{vmatrix} 1 & 1 & 1 \\ 2 & -1 & -4 \\ X & Y & Z \end{vmatrix} \Rightarrow x(- 4+1) – y (-4-2) + z (-1-2)$$

- 3x + 6y-3z+d =0

B(0,0,4) $\Rightarrow$ 0 +0-3.4+d =0

d =12

- 3x + 6y-3z+12 =0 / :(-3)

π : x – 2y +z = 4