Step-1

The two independent vectors in the plane $x+2y-3x-t=0$ are $(1,0,0,1),(0,3,2,0)$.

The three independent vectors in the plane $x+2y-3z-t=0$ are $(1,0,0,1),(0,3,2,0),(1,1,1,0)$.

(All vectors above satisfy the equations $x+2y-3z-t=0$).

Step-2

Four vectors are not linearly independent because the number of maximally independent vectors of the plane is three. Or dimension of the plane is three.

$$A=\begin{bmatrix}1 & 2 & -3 & -1\\ 0 & 0 & 0 & 0\\ 0 & 0 & 0 & 0\\ 0 & 0 & 0 & 0\end{bmatrix}$$

The null space of A is $\boxed{x+2y-3z-t=0}$.