ex. Find the normal and general forms of the equation of the plane that contains $P=(6,0,1)$ and has normal vector $n=\begin{bmatrix}1\\2\\3\end{bmatrix}$

sol. $n \cdot X = n \cdot P$

$\Rightarrow x+2y+3z=9$

Def: The vector form of the equation of a plane $P$ in $\mathbb{R}^3$ is

$X = P + su + tv$, where $p \in P$, $u, v$ are direction vectors for $P$.