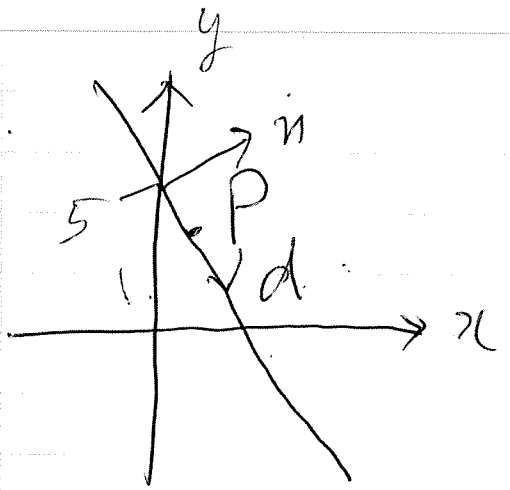
ex.



$2x+y=5$

$\vec{n}\cdot(x-p)=0 \Rightarrow n\cdot x = n\cdot p$

Def. The normal form of the equation of a line ℓ in $\mathbb{R}^2$ is

$n\cdot(x-p)=0$ or $n\cdot x = n\cdot p$

, p is a specific point on ℓ

The general form of the equation of ℓ is

$ax+by=c$, where $n=\begin{bmatrix} a \\ b \end{bmatrix}$ is a normal vector for ℓ.