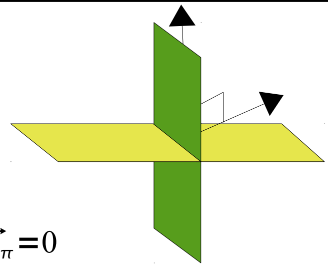
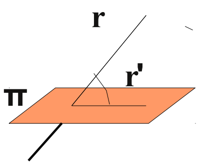
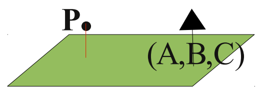
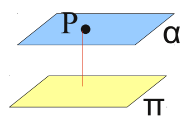
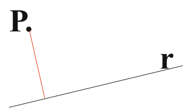
ÁNGULOS E DISTANCIAS

ÁNGULO	**Dúas rectas r e s** $\vec{u}_r(u_1, u_2, u_3)$ **e** $\vec{u}_s(v_1, v_2, v_3)$	O ángulo que forman **r** e **s** é o menor dos ángulos que forman os seus vectores directores $\vec{u}_r$ e $\vec{u}_s$
		$\cos(\widehat{r,s}) = \lvert\cos(\widehat{\vec{u}_r, \vec{u}_s})\rvert = \dfrac{\lvert\vec{u}_r \cdot \vec{u}_s\rvert}{\lvert\vec{u}_r\rvert \cdot \lvert\vec{u}_s\rvert} = \dfrac{\lvert u_1 v_1 + u_2 v_2 + u_3 v_3\rvert}{\sqrt{u_1^2+u_2^2+u_3^2} \cdot \sqrt{v_1^2+v_2^2+v_3^2}}$ CASO PARTICULAR $r \perp s$: $\vec{u}_r \cdot \vec{u}_s = 0$
	Dous planos α e π $\vec{n}_\alpha(A, B, C)$ **e** $\vec{n}_\pi(A', B', C')$	O ángulo que forman **α** e **π** é o menor dos ángulos que forman os seus vectores normais $\vec{n}_\alpha$ e $\vec{n}_\pi$
		$\cos(\widehat{\alpha,\pi}) = \lvert\cos(\widehat{\vec{n}_\alpha, \vec{n}_\pi})\rvert = \dfrac{\lvert\vec{n}_\alpha \cdot \vec{n}_\pi\rvert}{\lvert\vec{n}_\alpha\rvert \cdot \lvert\vec{n}_\pi\rvert}$ $\dfrac{\lvert AA' + BB' + CC'\rvert}{\sqrt{A^2+B^2+C^2} \cdot \sqrt{A'^2+B'^2+C'^2}}$  CASO PARTICULAR $\alpha \perp \pi$: $\vec{n}_\alpha \cdot \vec{n}_\pi = 0$
	Unha recta r e un plano π $\vec{u}_r(u_1, u_2, u_3)$ **e** $\vec{n}_\alpha(A, B, C)$	O ángulo que forma unha recta **r** e un plano **π** é o ángulo que forma a recta **r** coa recta, **r'** , proxección de r sobre **π**
		$sen(\widehat{r,\pi}) = sen(\widehat{r, r'}) = \lvert\cos(\widehat{\vec{u}_r, \vec{n}_\pi})\rvert = \dfrac{\lvert\vec{u}_r \cdot \vec{n}_\pi\rvert}{\lvert\vec{u}_r\rvert \cdot \lvert\vec{n}_\pi\rvert}$ $\dfrac{\lvert Au_1 + Bu_2 + Cu_3\rvert}{\sqrt{A^2+B^2+C^2} \cdot \sqrt{u_1^2+u_2^2+u_3^2}}$  CASO PARTICULAR $r \perp \pi$: $\vec{u}_r \parallel \vec{n}_\pi$ $r \parallel \alpha$: $\vec{u}_r \cdot \vec{n}_\pi = 0$
DISTANCIAS	**Punto *P* a plano *π*** ***P****(a,b,c)* ***π:*** *Ax+By+Cz+D=0*	$d(P, \pi) = \dfrac{\lvert Aa + Bb + Cc + D\rvert}{\lvert(A, B, C)\rvert}$ 
	e planos paralelos ***π****: Ax+By+Cz+D=0* ***α:*** *A'x+B'y+C'z+D'=0*	$d(\alpha, \pi) = d(P_\alpha, \pi) = d(P_\pi, \alpha)$ 
	Punto *P* a recta *r* ***P****(a,b,c)* ***r (P****$_r$*, $\vec{u}_r(u_1, u_2, u_3)$ ***)***	$d(P, r) = \dfrac{\lvert\overrightarrow{P_r P} \times \vec{u}_r\rvert}{\lvert\vec{u}_r\rvert}$ 
	e rectas paralelas ***r e s***	$d(r, s) = d(P_r, s) = d(P_s, r)$