

ANGULOS  $0^\circ < \alpha < 90^\circ$

$\cos(r, s) = \cos(\vec{r}, \vec{s}) = \frac{|\vec{r} \cdot \vec{s}|}{|\vec{r}| |\vec{s}|}$

$\cos(\pi_1, \pi_2) = \cos(\vec{n}_1, \vec{n}_2) = \frac{|\vec{n}_1 \cdot \vec{n}_2|}{|\vec{n}_1| |\vec{n}_2|}$

$\text{Sen}(r, \pi) = \cos(\vec{r}, \vec{n}_\pi) = \frac{|\vec{r} \cdot \vec{n}_\pi|}{|\vec{r}| |\vec{n}_\pi|}$

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DISTANCIAS

$d(P, Q) = |PQ| = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2}$

$d(P, r) = \frac{|PPr \times \vec{r}|}{|\vec{r}|}$

$d(P, \pi) = d(P(x_0, y_0, z_0), \pi: Ax + By + Cz + D = 0)$   
 $= \frac{|Ax_0 + By_0 + Cz_0 + D|}{\sqrt{A^2 + B^2 + C^2}}$

$d(r, s) = \frac{|\vec{r} \cdot \vec{s} \cdot \vec{r} \times \vec{s}|}{|\vec{r} \times \vec{s}|}$

$d(r, \pi) = d(P_r, \pi)$

$d(\pi, \pi')$

$d(P, \pi)$   
 $d(Ax + By + Cz + D = 0)$   
 $(Ax + By + Cz + D' = 0)$   
 $= \frac{|D - D'|}{\sqrt{A^2 + B^2 + C^2}}$

$x + 2y - 3z + 4 = 0$   
 $2x + 4y - 6z + 7 = 0$   
 $12x + 4y - 3z + 8 = 0$

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