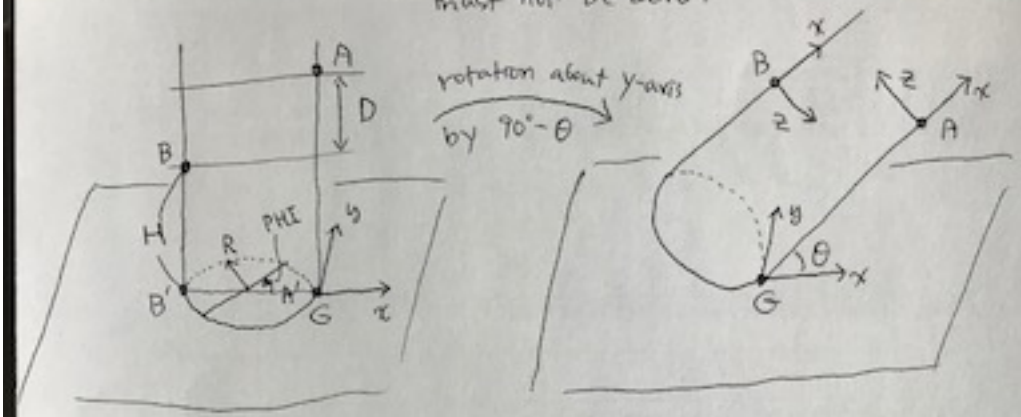
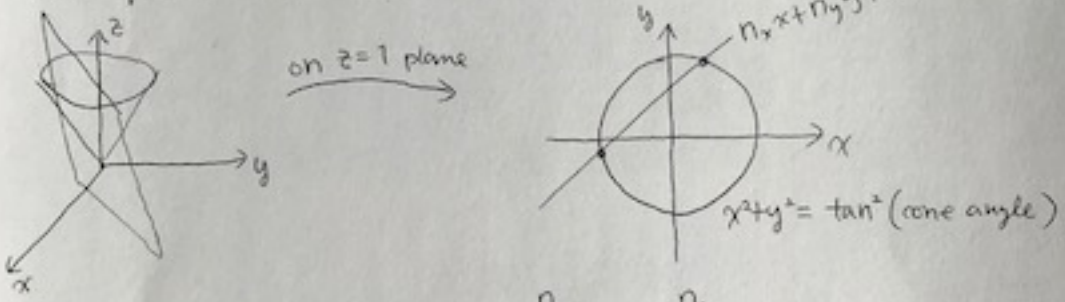
ReadME : is_forceclosure.m

input : H, THETA, PHI
must not be zero.



output : T (force-closure)
F (not force-closure)

※ How to find the intersection of a cone and a plane passing through the apex of the cone.



$n_x x = -n_y y - n_z$, $x = -\frac{n_y}{n_x} y - \frac{n_z}{n_x}$

$\left(\frac{n_y}{n_x} y + \frac{n_z}{n_x}\right)^2 + y^2 = \tan^2(\text{cone angle})$

$\left(1 + \frac{n_y^2}{n_x^2}\right) y^2 + \frac{2 n_y n_z}{n_x^2} y + \frac{n_z^2}{n_x^2} - \tan^2(\text{cone angle}) = 0$

⇒ We get y
⇒ We get x
⇒ then they meet at the vector $(x, y, 1)$