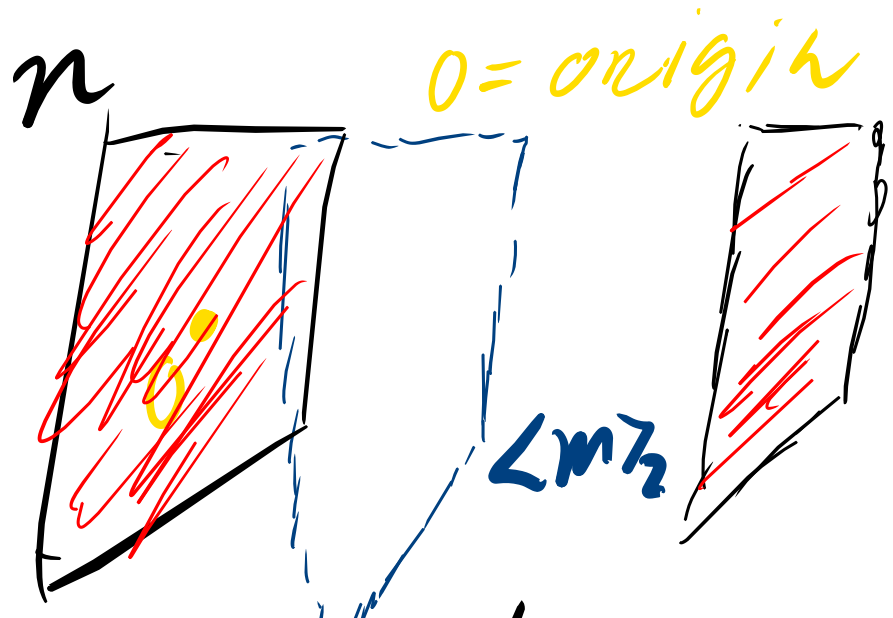
My GOA Project report

I discuss my formula's in their mathmatical form, In where I also show what each element within a formula is.
Also adding some visual aid to show that I understand geomertic effect of these formulas.

Translation method 1 p = Threeblade



$$n' = n + (-e_0)$$

$$m = n' \cdot n$$

$$p' = \langle m p m^{-1} \rangle_3$$

Rotations

$\bar{L} = e_1 \wedge e_2$ // The rotation axis

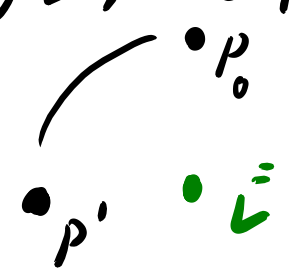
$\theta = \text{angle degrees} \cdot \left(\frac{3.14}{180}\right)$ // Rotation angle in radians

$R = \cos\left(\frac{\theta}{2}\right) - \sin\left(\frac{\theta}{2}\right) \bar{L}$ // Creating the Rotor

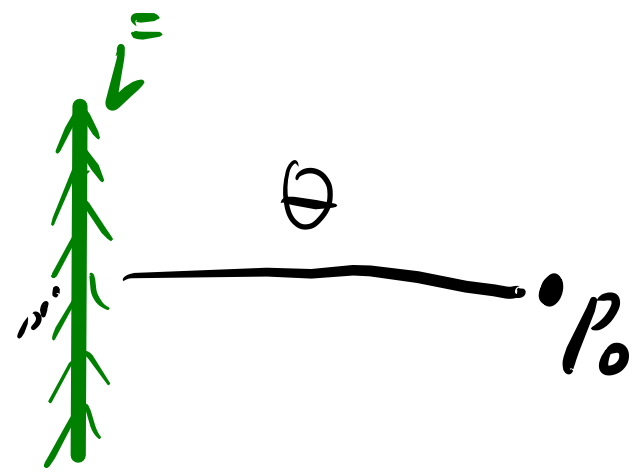
$p' = \langle R\, p_0\, R^{-1} \rangle_3$ // Applying rotation and fetching the three blade out of the multivector

Top view

$\theta = 90 \cdot \left(\frac{3.14}{180}\right)$



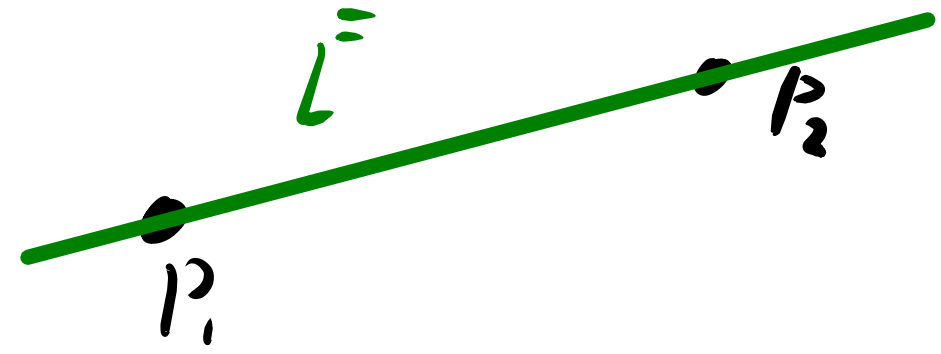
Side view



Reflection

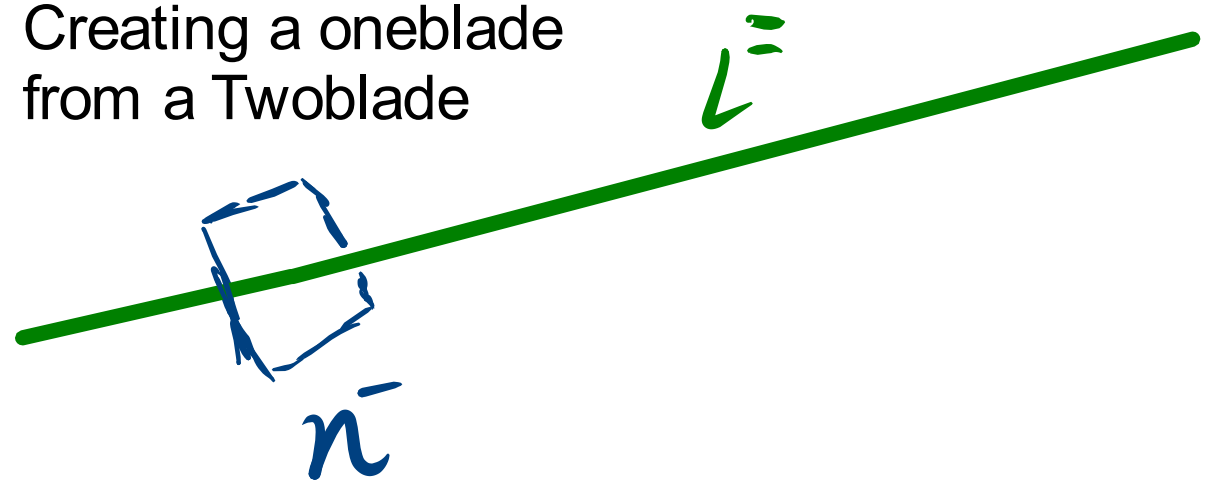
$$\vec{L} = P_1 \vee P_2 \;//$$

Creatine a twoblade from 2 Threeblades



$$\vec{n} = \mathcal{D}(L \wedge e_0) \;//$$

Creating a oneblade from a Twoblade



// After collisions

$$V' = \langle \vec{n}\, V_0\, \vec{n}^{-1} \rangle_3 \;//$$

Reflecting a twoblade by a one blade