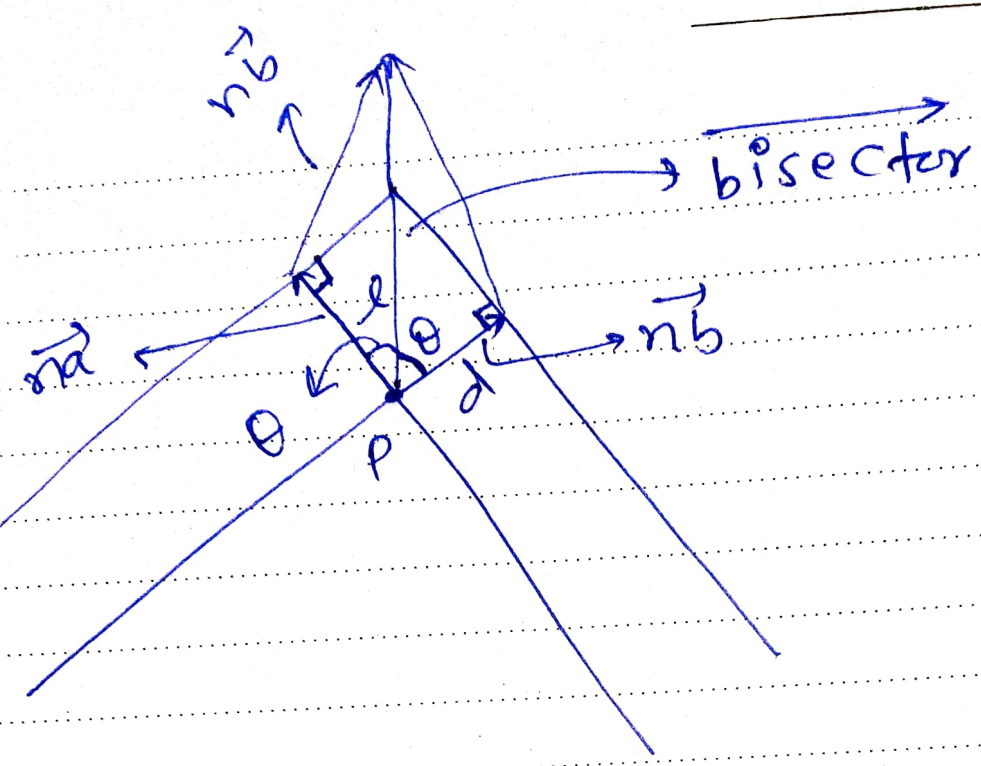

using vector shift, we will shif $\vec{na}$ & $\vec{nb}$.

$$\vec{na} + \vec{nb} = \overrightarrow{\text{bisector}}$$

unit vector of bisector -

$$\hat{\text{bisector}} = \frac{\overrightarrow{\text{bisector}}}{|\overrightarrow{\text{bisector}}|}$$

now using formula

$$\vec{na} \cdot \vec{nb} = |\vec{na}|\,|\vec{nb}| \cos 2\theta$$

$$= |\vec{na}|\,|\vec{nb}|\,(2\cos^2\theta - 1) \quad -$$

$|\vec{na}| = |\vec{nb}| = 1$ & $\cos\theta = \frac{d}{l}$

$$\vec{na} \cdot \vec{nb} = 2\frac{d^2}{l^2} - 1$$

$$1 + \vec{na} \cdot \vec{nb} = 2\,d^2/l^2$$

$$\boxed{l = \frac{\sqrt{2}\,d}{\sqrt{1+(\vec{na} \cdot \vec{nb})}}}$$

After getting length between the two points-

$$\boxed{\text{off setted point} = (\text{old point}) + l \times \hat{\text{bisector}}}$$