



$$\vec{u} = \cos(\theta/2)\vec{i} - \sin(\theta/2)\vec{j}$$

$$\vec{v} = \cos(\theta/2)\vec{i} + \sin(\theta/2)\vec{j}$$

$$\vec{P} = u \cdot \vec{u} + v \cdot \vec{v}$$

$$\vec{P} = u \cdot (\cos(\theta/2)\vec{i} - \sin(\theta/2)\vec{j}) + v \cdot (\cos(\theta/2)\vec{i} + \sin(\theta/2)\vec{j})$$

$$\vec{P} = (u+v) \cdot \cos(\theta/2) \cdot \vec{i} + (v-u) \cdot \sin(\theta/2) \cdot \vec{j}$$

$$x = (u+v) \cdot \cos(\theta/2)$$

$$y = (v-u) \cdot \sin(\theta/2)$$