

$$a, b \in \mathbb{R}$$

$$a^2 + b^2 = 1 \Leftrightarrow \left( \exists \theta \in \mathbb{R}, \begin{cases} a = \cos \theta \\ b = \sin \theta \end{cases} \right)$$

Démo :

$$a^2 + b^2 = 1 \Leftrightarrow |a + bi| = 1$$

$$\Leftrightarrow \left( \exists \theta \in \mathbb{R}, a + bi = e^{i\theta} = \cos \theta + i \sin \theta \right)$$

$$\leadsto \boxed{z \in \mathbb{C} \mid |z| = 1 \Leftrightarrow \exists \theta \in \mathbb{R}, z = e^{i\theta}}$$