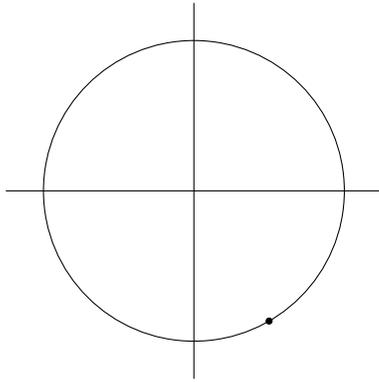


Ejemplos de puntos en la circunferencia unitaria

En esta lista de ejercicios, todos los ángulos son múltiplos de $\frac{\pi}{6}$ o de $\frac{\pi}{4}$.

1. Ejemplo. Dado un punto en la circunferencia unitaria, encontrar los ángulos α que le corresponden y escribir $\cos(\alpha)$ y $\text{sen}(\alpha)$.

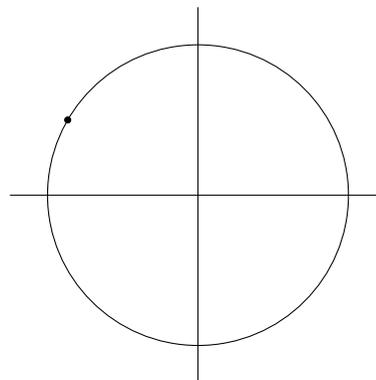
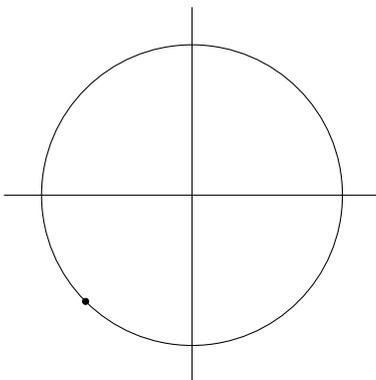
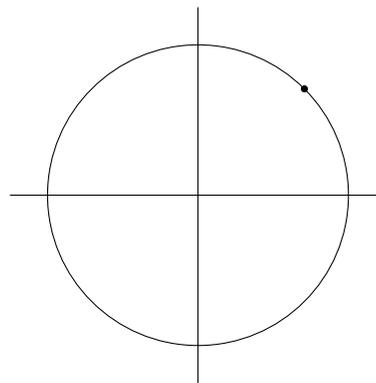
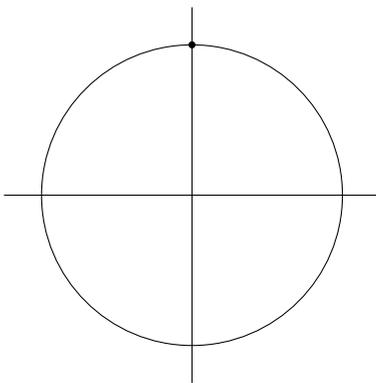


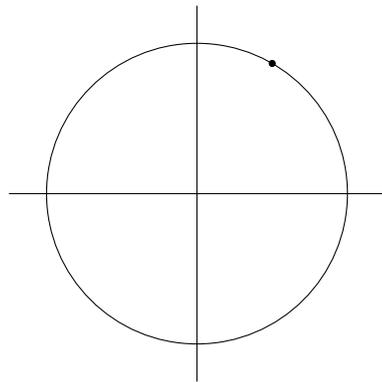
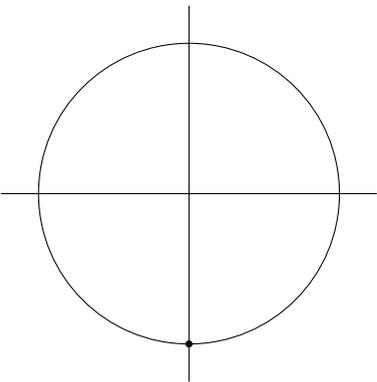
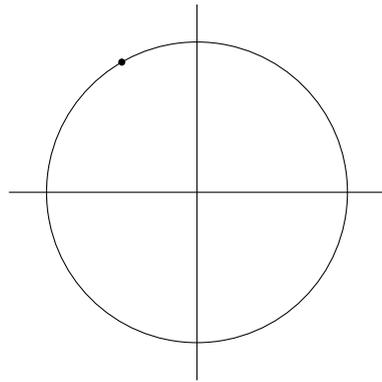
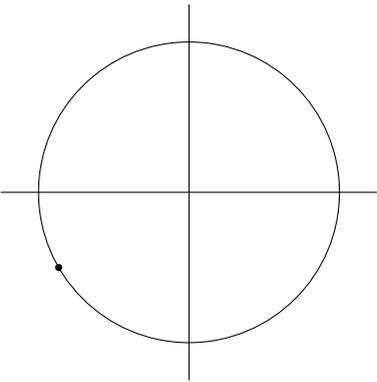
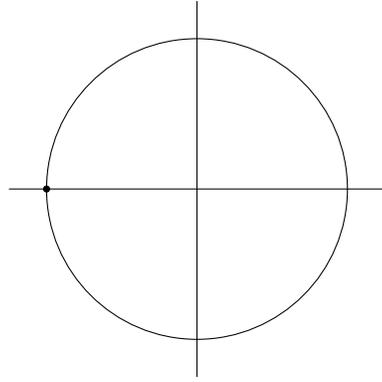
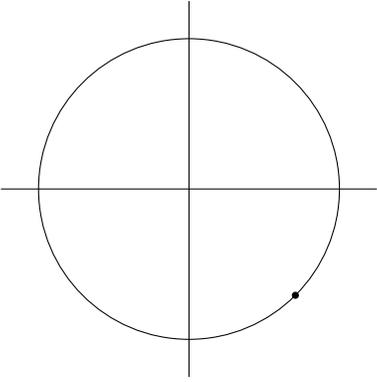
Respuesta.

$$\alpha = -\frac{\pi}{3} + 2k\pi, k \in \mathbb{Z}.$$

$$\cos(\alpha) = \frac{1}{2},$$

$$\text{sen}(\alpha) = -\frac{\sqrt{3}}{2}.$$





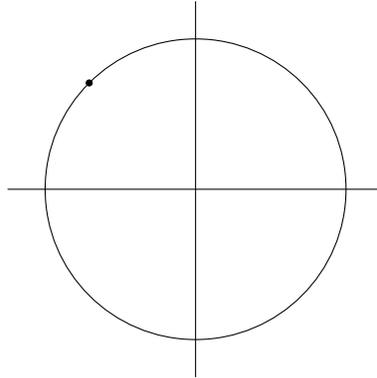
2. Ejemplo. Dados los valores $\cos(\alpha)$ y $\text{sen}(\alpha)$, encontrar todos los valores posibles de α y marcar el punto correspondiente en la circunferencia unitaria.

$$\cos(\alpha) = -\frac{\sqrt{2}}{2},$$

$$\text{sen}(\alpha) = \frac{\sqrt{2}}{2}.$$

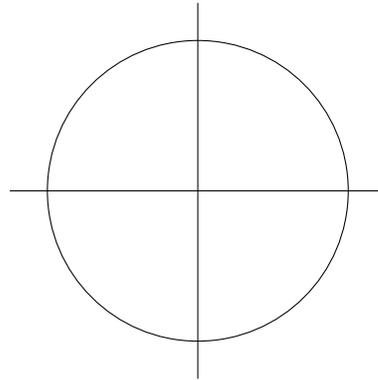
Respuesta.

$$\alpha = \frac{3\pi}{4} + 2k\pi, k \in \mathbb{Z}.$$



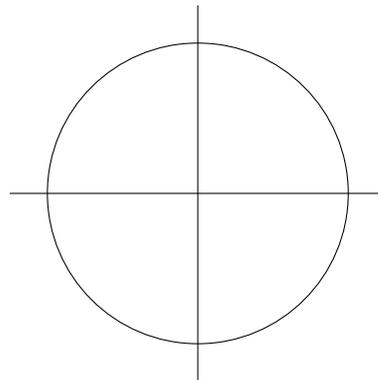
$$\cos(\alpha) = -1,$$

$$\text{sen}(\alpha) = 0.$$

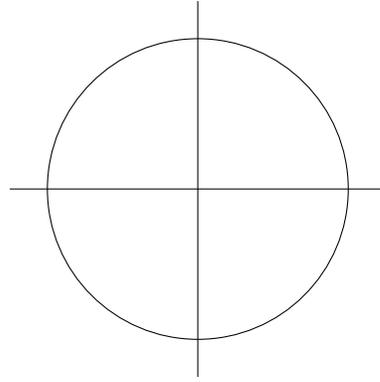


$$\cos(\alpha) = -\frac{1}{2},$$

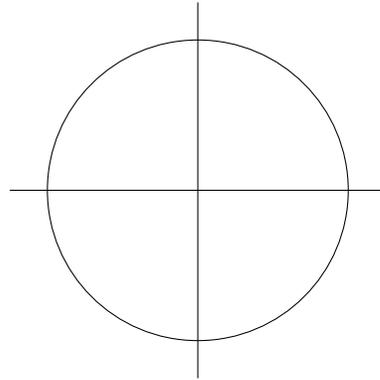
$$\text{sen}(\alpha) = -\frac{\sqrt{3}}{2}.$$



$$\cos(\alpha) = -\frac{\sqrt{3}}{2},$$
$$\operatorname{sen}(\alpha) = -\frac{1}{2}.$$



$$\cos(\alpha) = \frac{\sqrt{2}}{2},$$
$$\operatorname{sen}(\alpha) = -\frac{\sqrt{2}}{2}.$$



$$\cos(\alpha) = 0,$$
$$\operatorname{sen}(\alpha) = -1.$$

