

## Números complejos: representaciones

Arantza Lz. De Sosoaga Torija,  
UNED

### Módulo

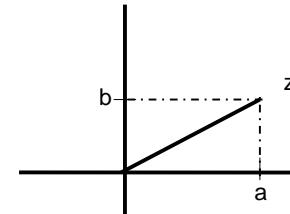
$$r = |z| =$$

$$z = \frac{1}{2} + \frac{\sqrt{3}}{2}i$$

A. Lz. de Sosoaga Torija

### Introducción

$$Z = a + bi$$



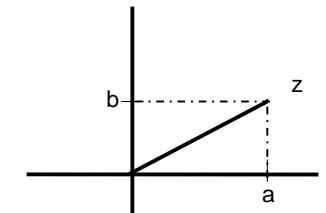
A. Lz. de Sosoaga Torija

### Argumento

$$\operatorname{sen}(\alpha) =$$

$$\cos(\alpha) =$$

$$\operatorname{tg}(\alpha) =$$



A. Lz. de Sosoaga Torija

## Forma trigonométrica

$$Z = a + bi$$

$$Z =$$

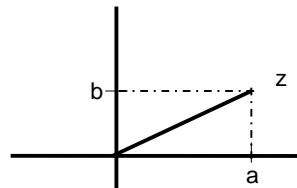
A. Lz. de Sosoaga Torija

## Ejemplo

$$z = \frac{1}{2} + \frac{\sqrt{3}}{2}i$$

$$|z| =$$

$$\alpha =$$



A. Lz. de Sosoaga Torija

## Forma polar

$$Z = a + bi = r(\cos \alpha + i \sin \alpha)$$

$$?r, \alpha?$$

$$r =$$

$$\alpha =$$

A. Lz. de Sosoaga Torija

## Ejemplo: forma trigonométrica

$$Z = a + bi = r(\cos \alpha + i \sin \alpha)$$

$$z = \frac{1}{2} + \frac{\sqrt{3}}{2}i$$

$$z =$$

A. Lz. de Sosoaga Torija

## *Ejemplo: forma polar*

---

$$Z = a + bi = r_{\alpha}$$

$$z = \frac{1}{2} + \frac{\sqrt{3}}{2} i$$

$$z =$$

---

*A. Lz. de Sosoaga Torija*

## *Resumen*

---

---

*A. Lz. de Sosoaga Torija*

