



## Why

We can discuss  $z$  in terms of circular coordinates.<sup>1</sup>

## Definition

Let  $z = (x, y) \in \mathbf{C}$ . Since  $z \in \mathbf{R}^2$ , we can identify  $z$  with the polar coordinates of  $(x, y)$  in the plane.

The *argument* of  $z \in \mathbf{C}$  is  $\tan^{-1}(\operatorname{Im} z / \operatorname{Re} z)$ . We denote the argument of  $z$  by  $\arg z$ .<sup>2</sup>

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<sup>1</sup>Future editions will expand.

<sup>2</sup>Future editions will include the geometric interpretations.



