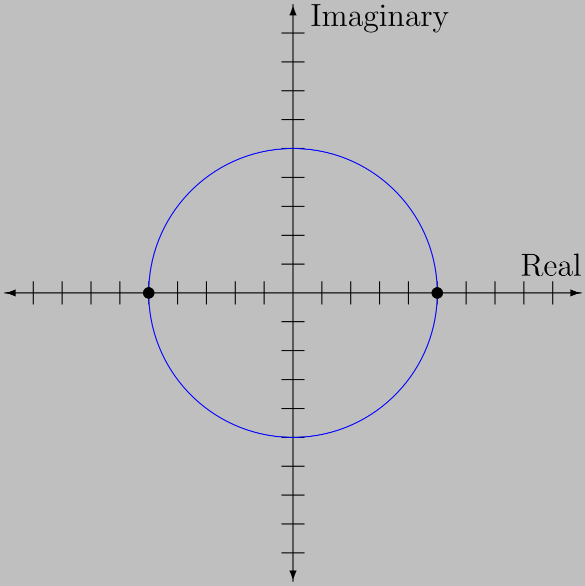
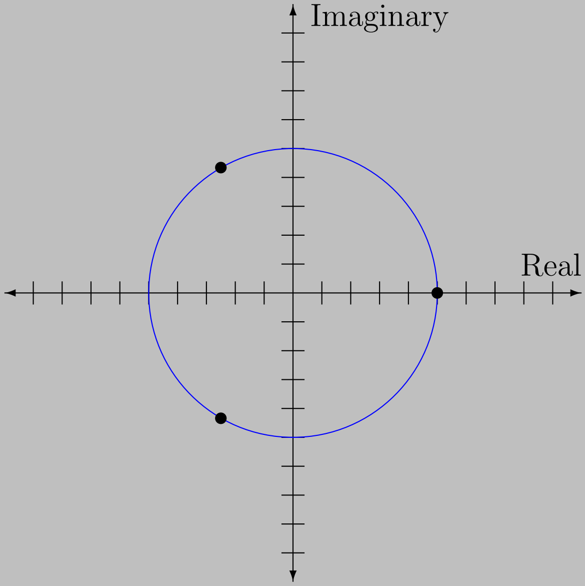
Complex Unit Circle

Polar coordinates

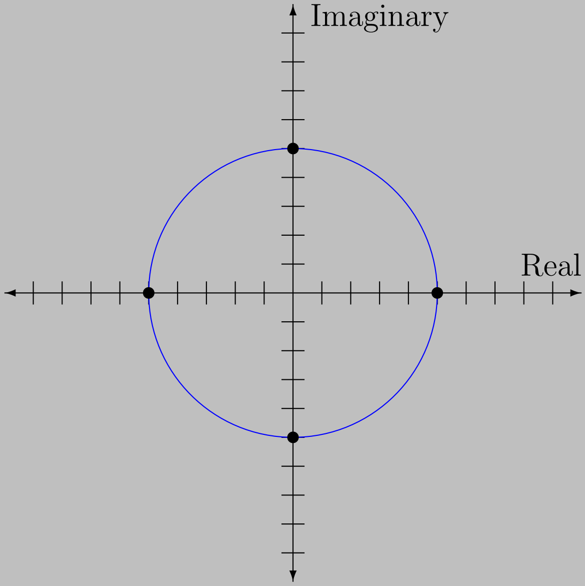
$x^2 = 1$ has two solutions: $x \in \{\pm 1\}$.



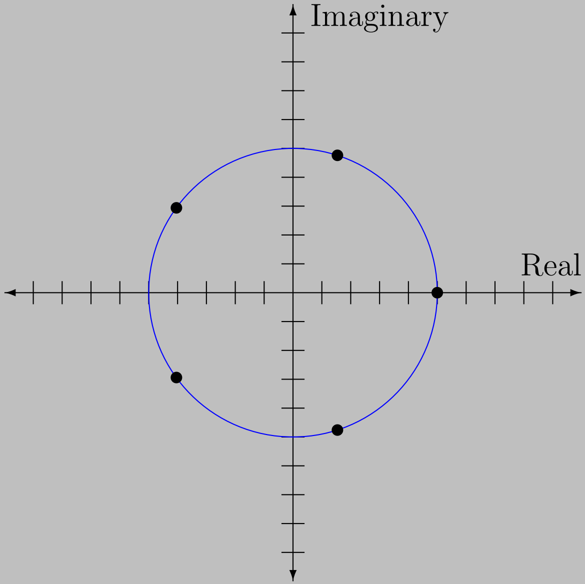
$x^3 = 1$ has three solutions: $x \in \{1, -0.5 \pm 0.866i\}$.



$x^4 = 1$ has four solutions: $x \in \{\pm 1, \pm i\}$.



$x^5 = 1$ has five solutions: $x \in \{1, 0.309 \pm 0.951i, -0.809 \pm 0.588i\}$.



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therefore

$$e^{2\pi i} = 1$$

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$$\begin{aligned} e^{(2\pi i)0/3} &= 1 \\ e^{(2\pi i)1/3} &= -0.5 + 0.866i \\ e^{(2\pi i)2/3} &= -0.5 - 0.866i \end{aligned}$$

The [MODE] menu has the option to represent complex numbers in the form $x = re^{\theta i}$ where r is the radius (complex absolute value) and θ is the angle.

Alternativly, the [MATH][CPX][→Rect] and [→Polar] menu items can be used.