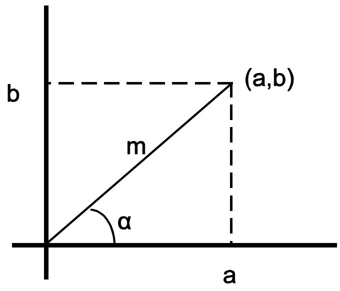
Números complejos:



$$\text{Expresion} \Rightarrow \begin{cases} \text{Forma binomica} \Rightarrow\ a+bi \\ \text{Forma cartesiana o puntual: } (a,b) \\ \text{Forma polar} \Rightarrow\ m_\alpha \Rightarrow \begin{cases} m = \sqrt{a^2+b^2} \\ tg\alpha = \dfrac{b}{a} \end{cases} \\ \text{Forma trigonometrica} \Rightarrow\ m\,[\cos\alpha + i\ \text{sen}\alpha] \\ \text{Forma exponencial} \Rightarrow\ m\ e^{i\alpha} \end{cases}$$

$$a + bi \Rightarrow \begin{cases} \text{conjugado} \Rightarrow\ a - bi \\ \text{inverso} \Rightarrow\ \dfrac{1}{a+bi} \\ \text{opuesto} \Rightarrow\ -a - bi \end{cases}$$

$$\text{Potencias de } i \Rightarrow \begin{cases} i = \sqrt{-1} \\ i^2 = -1 \\ i^3 = -i \\ i^4 = 1 \end{cases}$$

$$\text{Operaciones} \Rightarrow \begin{cases} \text{Suma} \Rightarrow\ [a+bi]+[c+di] = [a+c]+[b+d]\ i \\ \text{Resta} \Rightarrow\ [a+bi]-[c+di] = [a-c]+[b-d]\ i \\ \text{Producto} \Rightarrow \begin{cases} \text{Forma binomica} \Rightarrow\ [a+bi]\,[c+di] = [ac-bd]+i\,[bc+da] \\ \text{Forma polar} \Rightarrow\ [a+bi]\,[c+di] = m_\alpha\ r_\beta = [mr]_{\alpha+\beta} \end{cases} \\ \text{Cociente} \Rightarrow \begin{cases} \text{Forma binomica} \Rightarrow\ \dfrac{a+bi}{c+di} = \dfrac{a+bi}{c+di}\dfrac{c-di}{c-di} \\ \text{Forma polar} \Rightarrow\ \dfrac{a+bi}{c+di} = \dfrac{m_\alpha}{r_\beta} = \left[\dfrac{m}{r}\right]_{\alpha-\beta} \end{cases} \\ \text{Potencia} \Rightarrow\ [a+bi]^n = [m_\alpha]^n = [m^n]_{n\alpha} \\ \text{Raiz} \Rightarrow \begin{cases} \text{grados} \Rightarrow\ \sqrt[n]{a+bi} = \sqrt[n]{m_\alpha} = \left[\sqrt[n]{m}\right]_{\frac{\alpha+360k}{n}} \Rightarrow\ k = 0,\ 1,\ 2,\ \ldots n-1 \\ \text{radianes} \Rightarrow\ \sqrt[n]{a+bi} = \sqrt[n]{m_\alpha} = \left[\sqrt[n]{m}\right]_{\frac{\alpha+2\pi k}{n}} \Rightarrow\ k = 0,\ 1,\ 2,\ \ldots n-1 \end{cases} \end{cases}$$