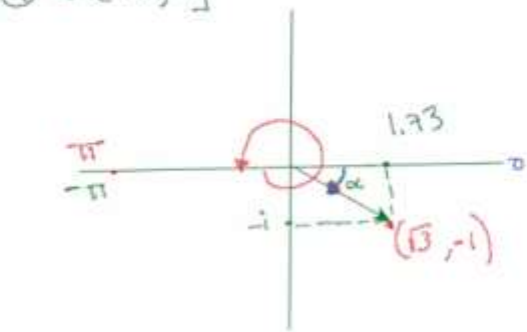
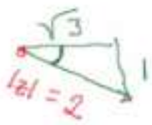
$z = z_0^{c}$ $\quad$ c = complejo, z_0 = complejo

$z = (\sqrt{3} - i)^6 \Rightarrow z_0 = \sqrt{3} - i \rightarrow \begin{cases} |z_0| = 2 \\ \Theta_0 = -\frac{\pi}{6} \end{cases}$

$\Theta \in (-\pi, \pi]$



$\underline{z_0 = 2 \cdot e^{-\frac{\pi}{6} i}}$

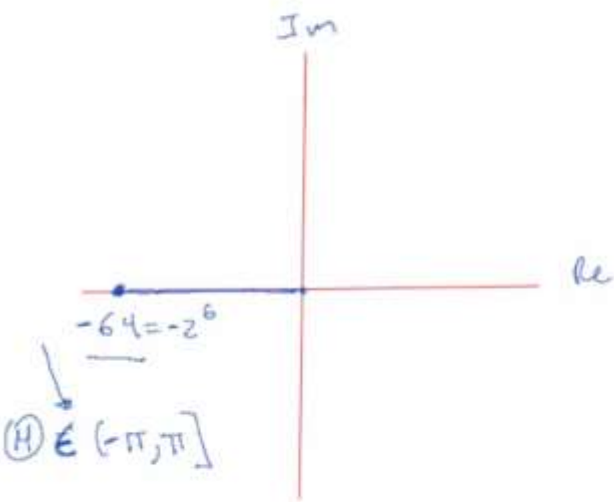


$z = z_0^6 = \left[2 \cdot e^{-\frac{\pi}{6} i}\right]^6 = 2^6 \cdot e^{-\pi i}$

$z_0 = 2^6 \cdot [\cos(-\pi) + i\,\cancel{\operatorname{sen}(-\pi)}^{\,0}]$

$\alpha = \tan^{-1}\left(\frac{1}{\sqrt{3}}\right) = \frac{\pi}{6}$

$z_0 = -2^6 \cdot (-1) = \underline{-2^6}$



$z_0 = 2^6[\cos(-\pi) + i \operatorname{sen}(-\pi)]$

$\underline{\cos(-\pi) = \cos(\pi)}$

$\therefore$ dado que $\Theta \in (-\pi, \pi]$

$\therefore \underline{\Theta_0 = \pi}$

$-2^6 = \underline{+2^6 \cdot e^{i\pi}} = z_0$

$z = z_0^{c}$

$z = \exp\left[c \cdot [\ln|z_0| + i(\Theta_0 + 2n\pi)]\right] \quad n = 0, \pm 1, \ldots$

$\Theta_0 = -\frac{\pi}{6} \qquad c = 6 \qquad \ln|z_0| = \ln 2$

$z = \exp\left[6 \cdot \ln 2 + i6\left(-\frac{\pi}{6} + 2n\pi\right)\right] \quad n = 0, \pm 1, \pm 2, \ldots$

$z = e^{\ln(2^6)} \cdot e^{i(-\pi + 6n(2\pi))} =$

$z = 2^6 \cdot e^{-i\pi} \cdot \cancel{e^{i(6n)\cdot(2\pi)}}^{\,1} \quad n = 0, \pm 1, \pm 2, \ldots$

$z = 2^6 \cdot e^{-i\pi} = -2^6 \Rightarrow \boxed{\Theta_0 = \pi}$