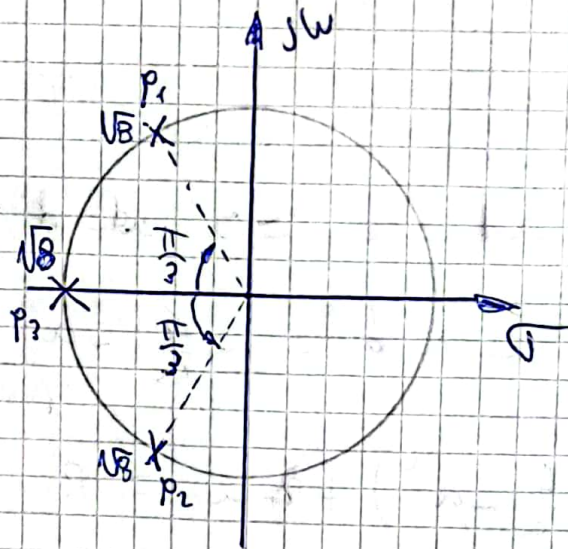


## ② Diagrama de polos y ceros

$$\frac{-\sqrt[3]{2} \pm \sqrt{\left(\sqrt[3]{2}\right)^2 - 4\sqrt[3]{4}}}{2}$$

$$\frac{-\sqrt[3]{2} \pm \sqrt{8 - 32}}{2} = -\sqrt{2} \pm j\sqrt{6}$$

polos:  $\{-\sqrt{2} + j\sqrt{6}; -\sqrt{2} - j\sqrt{6}; -2^{3/2}\}$



$$\begin{aligned} \varphi_{p1} &= \arctan(\sqrt{3}) = \frac{\pi}{3} \\ \varphi_{p2} &= \arctan(-\sqrt{3}) = -\frac{\pi}{3} \\ \varphi_{p3} &= \dots = 0 \end{aligned}$$