

Equazioni goniometriche elementari

a)

$$\sin(x) = p$$

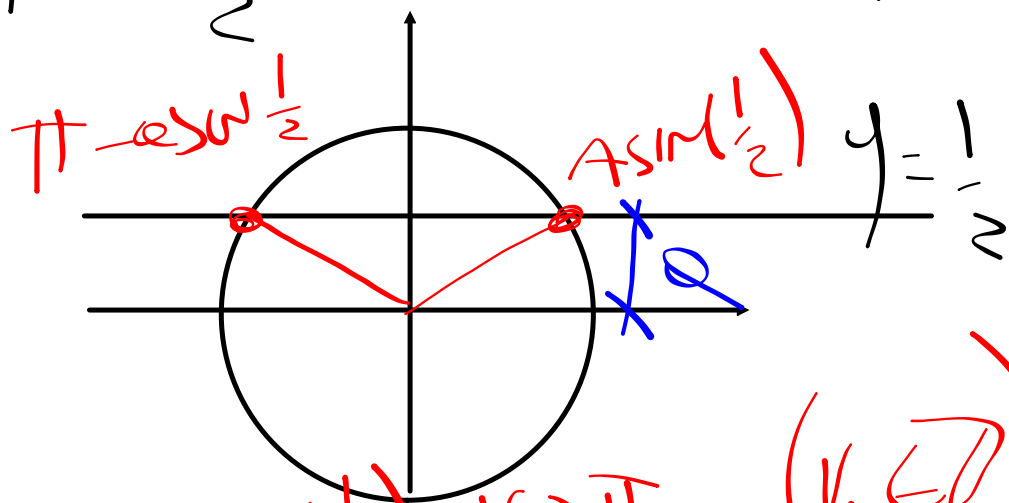
b)

$$\cos(x) = p$$

c)

$$\tan(x) = p$$

e) $\sin(x) = \frac{1}{2} \rightarrow x = \arcsin\left(\frac{1}{2}\right)$



$$x_1 = \arcsin\left(\frac{1}{2}\right) + k2\pi$$

$$x_2 = \pi - \arcsin\left(\frac{1}{2}\right) + k2\pi \quad (k \in \mathbb{Z})$$

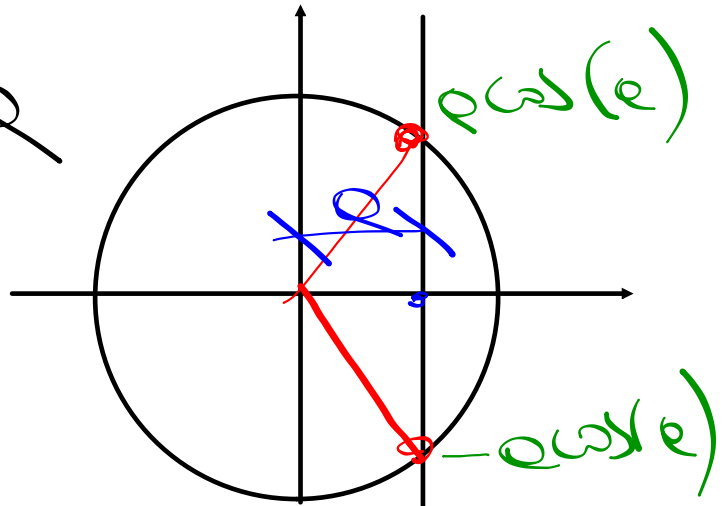
IN GENERAL

$$-1 < p < 1 \quad \begin{cases} x = \arcsin(p) + k2\pi \\ x = \pi - \arcsin(p) \end{cases}$$

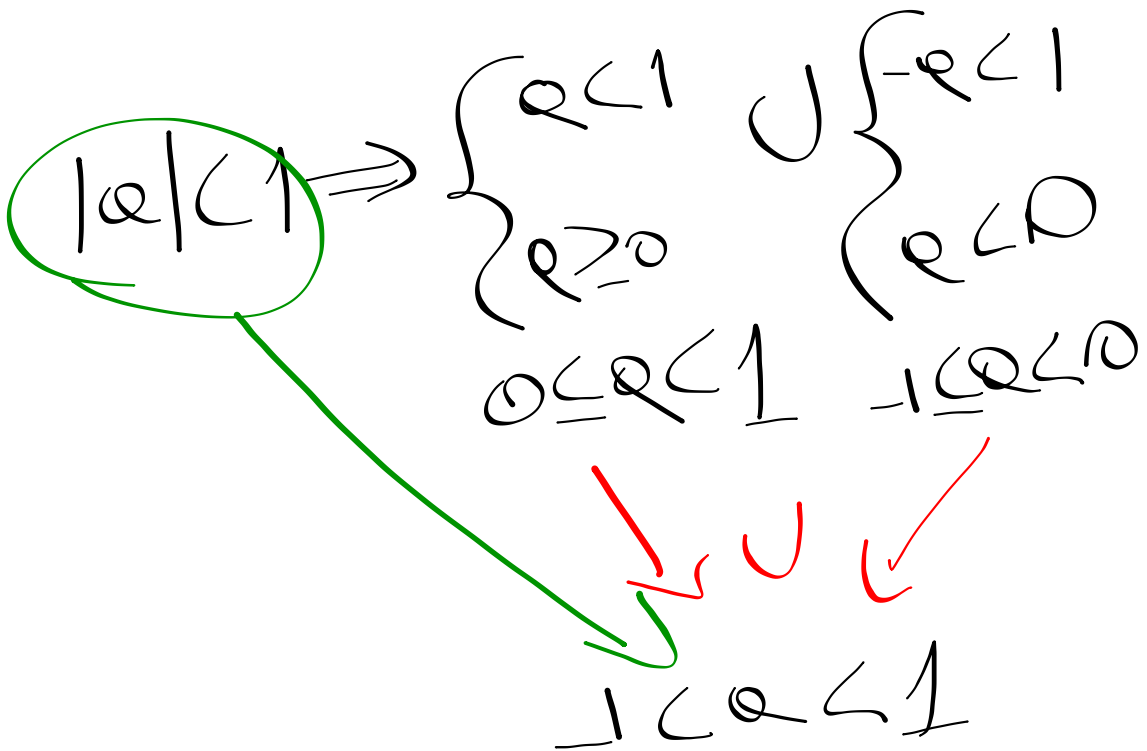
$$\sin(x) = p \quad \begin{cases} p = \pm 1 & x = p \frac{\pi}{2} + k2\pi \\ |p| > 1 & \text{IMPOSS} \end{cases}$$

b)

$$\cos x = \rho$$



$$\cos x = \rho \begin{cases} |\rho| < 1 & x = \pm \arccos(\rho) + k2\pi \\ |\rho| = 1 & x = \arccos(\rho) + k2\pi \\ |\rho| > 1 & \text{IMPOSS} \end{cases}$$



c)

$$\text{tg}(x) = \rho$$

$$x = \text{tg}(\rho) + k\pi$$

