$$3\sin x + 4\cos x + 5 = 0$$

$$\sin x = \frac{2t}{1+t^2} \qquad t = \mathrm{tg}\frac{x}{2}$$

$$\cos x = \frac{1-t^2}{1+t^2} \qquad x \neq \pi + k2\pi$$

$$\frac{6t}{1+t^2} + \frac{4-4t^2}{1+t^2} + 5 = 0$$

$$\frac{6t+4-4t^2+5+5t^2}{\cancel{1+t^2}} = 0 \qquad t^2+6t+9=0$$

$$(t+3)^2 = 0$$

$$t = -3$$

$$\mathrm{tg}\left(\frac{x}{2}\right) = -3$$

$$\frac{x}{2} = \mathrm{arctg}(-3) + k\pi$$

$$x = 2\,\mathrm{arctg}(-3) + k2\pi$$

$$\underbrace{3\sin x + 4\cos x} + 5 = 0$$

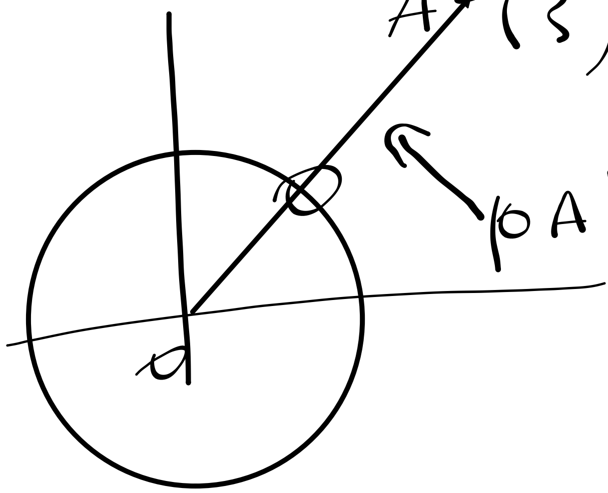
$$\frac{1}{2}\sin x + \frac{\sqrt{3}}{2}\cos x + \frac{\sqrt{2}}{2} = 0$$

$\sin 30°$ $\cos 30°$

$$\cos\left(x - \frac{\pi}{6}\right) + \frac{\sqrt{2}}{2} = 0$$

$$3\sin x + 3\sqrt{3}\cos x + 3\sqrt{2} = 0$$

$A(3;\, 3\sqrt{3})$



$$|OA| = \sqrt{3^2 + (3\sqrt{3})^2} = \sqrt{9+27} = \sqrt{36} = 6$$

SE DIVIDO PER 6 $\left(\sqrt{a^2+b^2}\right)$

L'INTERA EQ

OTTENGO

$$\frac{1}{2}\sin x + \frac{\sqrt{3}}{2}\cos x + \frac{\sqrt{2}}{2} = 0$$

$$3\sin x + 4\cos x + 5 = 0$$

DIVIDO POR $\sqrt{3^2+4^2} = 5$

$$\frac{3}{5}\sin x + \frac{4}{5}\cos x + 1 = 0$$

$$\Rightarrow \exists\, \alpha \;/\; \begin{cases} \sin\alpha = \frac{3}{5} \\ \cos\alpha = \frac{4}{5} \end{cases} \quad \alpha = a\sin\left(\frac{3}{5}\right) \quad a\cos\left(\frac{4}{5}\right)$$

$$\sin\alpha \sin x + \cos\alpha \cos x = -1$$

$$\cos(x-\alpha) = -1$$

$$x - \alpha = \pi + k2\pi$$

$$x = \alpha + \pi + k2\pi$$

$$x = A\sin\left(\frac{3}{5}\right) + \pi + k2\pi$$