2) $3\cos x + 2\sin x = -3$

$$3\cos x + 2\sqrt{1-\cos^2 x} = -3$$

$$2\sqrt{1-\cos^2 x} = -3 - 3\cos x$$

$$4(1-\cos^2 x) = 9(1+\cos x)^2$$

$$4 - 4\cos^2 x = 9 + 18\cos x + 9\cos^2 x$$

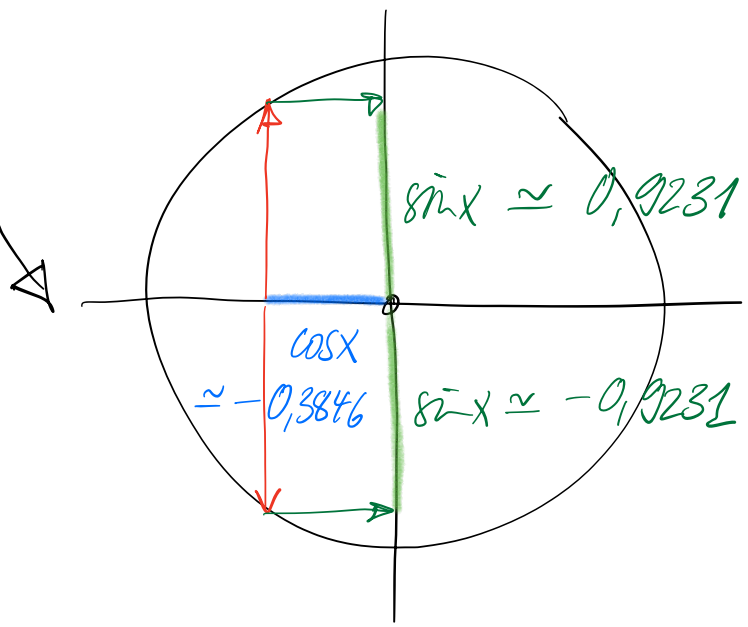
$$13\cos^2 x + 18\cos x + 5 = 0$$

$$\cos x = \frac{-18 \pm \sqrt{18^2 - 4\cdot 13\cdot 5}}{26}$$

$$\cos x = \frac{-18 \pm 8}{26} = \begin{cases} -\frac{10}{26} = -\frac{5}{13} \\ -\frac{26}{26} = -1 \end{cases}$$

$$x = \pm \underbrace{\arccos\left(-\frac{5}{13}\right)}_{1{,}9655} + k \cdot 2\pi$$

$$x = \pm \arccos(-1) + k \cdot 2\pi = \pi + k \cdot 2\pi$$



$$3 \cdot (-0{,}3846) + 2 \cdot 0{,}9231 \neq 3$$

$$3 \cdot (-0{,}3846) + 2 \cdot (-0{,}9231) = -3 \quad \checkmark$$

En fin de compte,

$$x = -\arccos\left(-\frac{5}{13}\right) + k \cdot 2\pi$$

$$x = \pi + k \cdot 2\pi$$

b) $\sqrt{1-\cos^2 t} + 3\cos t = 3$

$\sqrt{1-\cos^2 t} = 3 - 3\cos t$

$1 - \cos^2 t = (3 - 3\cos t)^2$ ← «Faule»

c) $\sqrt{1-\cos^2 x} - \cos x = \sqrt{2}$

$\sqrt{1-\cos^2 x} = \cos x + \sqrt{2}$

«Faule»

$1 - \cos^2 x = \cos^2 x + 2\sqrt{2}\cos x + 2$