$$\sin^3 x = \frac{1}{2}$$

$$\sin x = \sqrt[3]{\frac{1}{2}} \iff \cancel{x} = \arcsin\left(\sqrt[3]{\frac{1}{2}}\right) \simeq$$

$$\simeq 52{,}53^\circ \text{ i } 127{,}47^\circ$$

per tant les solucions de l'equació son:

$$52{,}53^\circ + 360^\circ K$$

i $\qquad K \in \mathbb{Z}$

$$127{,}47^\circ + 360^\circ K$$

e) $\sin^2 x = 1 + \cos^2 x$ $\qquad$ com $\sin^2 x + \cos^2 x = 1$ $\forall x \in \mathbb{R}$.

$\sin^2 x = 1 - \cos^2 x$

tenim:

$$1 - \cos^2 x - 1 - \cos^2 x = 0$$

$$-2\cos^2 x = 0$$

$$\cos x = 0 \iff x = \frac{\pi}{2} + \pi K \quad K \in \mathbb{Z}$$

f) $\cos x - 2\sin^2 x + 1 = 0$

com $\sin^2 x = 1 - \cos^2 x$

tenim: $\cos x - 2(1 - \cos^2 x) + 1 = 0$

$$2\cos^2 x + \cos x - 1 = 0$$

$$\cos x = \frac{-1 \pm \sqrt{1+8}}{4} \begin{cases} \frac{1}{2} \\ -1 \end{cases}$$

per tant, $\quad x = \begin{cases} \frac{\pi}{3} + 2K\pi \\ \text{ó} \\ \frac{5\pi}{3} + 2K\pi \\ \text{ó} \\ \pi + 2K\pi \end{cases} \quad K \in \mathbb{Z}$

g) $2 - 4\cos^2 x = 2\sin x$

Com $\cos^2 x = 1 - \sin^2 x$

tenim $\quad 2 - 4(1 - \sin^2 x) - 2\sin x = 0$