

$$|\cos x| = \cos 3x$$

$$\left[2k\pi; \frac{\pi}{2} + k\pi; \frac{3}{4}\pi + 2k\pi; \frac{5}{4}\pi + 2k\pi \right]$$

$$\textcircled{1} \begin{cases} \cos x \geq 0 \\ \cos x = \cos 3x \end{cases}$$

$$\vee \textcircled{2} \begin{cases} \cos x < 0 \\ -\cos x = \cos 3x \end{cases}$$

$$\textcircled{1} \begin{cases} \cos x \geq 0 \\ \cos x = \cos 3x \end{cases}$$

$$\begin{cases} \cos x \geq 0 \\ x = 3x + 2K\pi \end{cases}$$

$$\vee \begin{cases} \cos x \geq 0 \\ x = -3x + 2K\pi \end{cases}$$

$$\begin{cases} \cos x \geq 0 \\ -2x = 2K\pi \end{cases}$$

$$\vee \begin{cases} \cos x \geq 0 \\ 4x = 2K\pi \end{cases}$$

$$\begin{cases} \cos x \geq 0 \\ x = K\pi \end{cases}$$

note che
x = K pari

$$x = 2K\pi$$

$$\vee \begin{cases} \cos x \geq 0 \\ x = K\frac{\pi}{2} \end{cases}$$

VA ESCLUSO

$$x = 2K\pi \vee x = \frac{\pi}{2} + K\pi$$

$$\textcircled{1} \rightarrow x = 2K\pi \vee x = \frac{\pi}{2} + K\pi$$

$$\textcircled{2} \begin{cases} \cos x < 0 \\ -\cos x = \cos 3x \\ \cos(\pi+x) \end{cases}$$

$$\begin{cases} \cos x < 0 \\ \cos(\pi+x) = \cos 3x \end{cases}$$

$$\begin{cases} \cos x < 0 \\ \pi+x = 3x + 2K\pi \end{cases}$$

$$\vee \begin{cases} \cos x < 0 \\ \pi+x = -3x + 2K\pi \end{cases}$$

$$\begin{cases} \cos x < 0 \\ \pi + x = 3x + 2K\pi \end{cases}$$

$$-2x = 2K\pi - \pi$$

$$2x = 2K\pi + \pi$$

$$x = \frac{\pi}{2} + K\pi$$

NON ACC.

perché

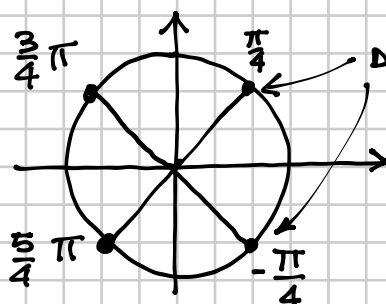
$$\cos x = 0$$

$$\vee \begin{cases} \cos x < 0 \\ \pi + x = -3x + 2K\pi \end{cases}$$

$$4x = 2K\pi - \pi$$

$$x = K\frac{\pi}{2} - \frac{\pi}{4}$$

$$x = -\frac{\pi}{4} + K\frac{\pi}{2}$$



DA ESCLUDERE
perché $\cos x < 0$

$$x = \frac{3}{4}\pi + 2K\pi \vee x = \frac{5}{4}\pi + 2K\pi$$

$$x = 2K\pi \vee x = \frac{\pi}{2} + K\pi \vee x = \frac{3}{4}\pi + 2K\pi \vee x = \frac{5}{4}\pi + 2K\pi$$