

$$\sin(3x) = \cos(5x)$$

$$\Leftrightarrow \sin(3x) = \sin(\pi/2 - 5x)$$

$$\Leftrightarrow \begin{cases} 3x = \pi/2 - 5x + 2k\pi \\ \text{ou} \\ 3x = \pi - (\pi/2 - 5x) + 2k\pi \end{cases}$$

$$\Leftrightarrow \begin{cases} 8x = \pi/2 + 2k\pi \\ \text{ou} \\ -2x = \pi/2 + 2k\pi \end{cases} \Leftrightarrow \begin{cases} x = \frac{\pi}{16} + \frac{k\pi}{4} \\ \text{ou} \\ x = -\pi/4 + k\pi \end{cases}$$