

2.28
1

$$\sin^3 x + \cos^3 x = \cos x$$

$$\sin^3 x + \cos x (\cos^2 x - 1) = 0$$

$$\sin^3 x - \sin^2 x \cos x = 0$$

$$\sin^2 x (\sin x - \cos x) = 0$$

$$\downarrow$$
$$\boxed{x = \pi k}$$

$k \in \mathbb{Z}$

$$\downarrow$$
$$\sin x = \cos x \quad /: \cos x \neq 0$$

$$\tan x = 1$$

$$\boxed{x = \frac{\pi}{4} + \pi k}$$