

$$\tan(x) \tan(3x) = 1$$

$$\tan(3x) = \cot(x)$$

$$\tan(3x) = \tan\left(\frac{\pi}{2} - x\right)$$

$$3x = \frac{\pi}{2} - x + k\pi$$

$$x = \frac{\pi}{8} + \frac{k\pi}{4}$$