

$$\text{tg}x - \text{tg}2x = \sin x$$

$$\sin x / \cos x - \sin 2x / \cos 2x = \sin x$$

$$(\sin x \cdot \cos 2x - \sin 2x \cdot \cos x) / \cos 2x \cdot \cos x = \sin x$$

$$\sin(x-2x) / \cos 2x \cdot \cos x = \sin x$$

$$-\sin x / \cos 2x \cdot \cos x = \sin x$$

$$-\sin x (1 / \cos 2x \cdot \cos x + 1) = 0$$

$$\sin x = 0$$

$$x = \pi k$$

$$1 / \cos 2x \cdot \cos x + 1 = 0$$

1 способ

$$\cos 2x \cdot \cos x + 1 = 0$$

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

$$\cos x = t$$

$$2t^3 - t + 1 = 0$$

$$(t - (-1)) \cdot (2t^2 - 2t + 1) = 0$$

$$t + 1 = 0$$

$$\cos x = -1$$

$$x = \pi + 2\pi k$$

Одз

$$\cos x \neq 0$$

$$\cos 2x \neq 0$$

$$\cos x = 0$$

$$x = \pi/2 + \pi k$$

$$\cos 2x = 0$$

$$2x = \pi/2 + \pi k$$

$$x = \pi/4 + \pi k/2$$

	2	0	-1	1
-1	2	-2	1	0

$$\pm \frac{1}{2}$$

$$\pm \frac{1}{2} \quad \pm \frac{1}{1}$$

2 способ

$$\cos 2x \cdot \cos x + 1 = 0$$

$$\cos 2x \cdot \cos x = -1$$

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

$$\cos x = 1$$

или

$$\cos 2x = 1 \quad 2\cos^2 x - 1 = 1 \quad 2 \cdot 1 - 1 = 1$$

$$\cos x = -1$$

$$\cos 2x = 1$$

$$2x = 2\pi k$$

$$x = \pi k$$

$$x = \pi + 2\pi k$$

Answer: $x = \pi k$