

$$5(\sin x + \cos x) + \sin 3x - \cos 3x = 2\sqrt{2}(2 + \sin 2x)$$

$$5(\sin x + \cos x) + \sin 3x - \cos 3x - 2\sqrt{2}(2 + \sin 2x) = 0$$

$$5(\sin x + \cos x) + 3\sin x - 4\sin^3(x) - 4\cos^3(x) + 3\cos x - 2\sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$5(\sin x + \cos x) + 3(\sin x + \cos x) - 4(\sin^3(x) + \cos^3(x)) - 2\sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$8(\sin x + \cos x) - 4(\sin^3(x) + \cos^3(x)) - 2\sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$2(4(\sin x + \cos x) - 2(\sin^3(x) + \cos^3(x)) - \sqrt{2}(2 + 2\cos x \sin x)) = 0$$

$$4(\sin x + \cos x) - 2(\sin^3(x) + \cos^3(x)) - \sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$4(\sin x + \cos x) - 2(\sin(x) + \cos(x))(\sin^2(x) - \sin(x)\cos(x) + \cos^2(x)) - \sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$4(\sin x + \cos x) - 2(\sin x + \cos x)(1 - \sin(x)\cos(x)) - \sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$(\sin x + \cos x)(4 - 2(1 - \sin(x)\cos(x))) - \sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$(\sin x + \cos x)(4 - 2 + 2\sin(x)\cos(x)) - \sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$(\sin x + \cos x)(2 + 2\sin(x)\cos(x)) - \sqrt{2}(2 + 2\cos x \sin x) = 0$$

$$(2 + 2\sin(x)\cos(x))((\sin x + \cos x) - \sqrt{2}) = 0$$

$$2 + 2\sin(x)\cos(x) = 0$$

$$\sin x + \cos x - \sqrt{2} = 0$$

$$2 + \sin 2x = 0$$

$$\sin x + \cos x = \sqrt{2}[\sin x \cdot 1/\sqrt{2} + \cos x \cdot 1/\sqrt{2}] = \sqrt{2}[\sin x \cos(P/4) + \sin(P/4) \cos x] = \sqrt{2} \sin(x + P/4)$$

$$\sin 2x = -2$$

$$\cos t = 1/\sqrt{2}$$

Нет реш

$$\sin t = 1/\sqrt{2}$$

$$t = P/4$$

$$\sqrt{2} \sin(x + P/4) - \sqrt{2} = 0$$

$$\sin(x + P/4) = 1$$

$$x + P/4 = P/2 + 2Pk$$

$$x = P/2 + 2Pk - P/4$$

$$x = P/4 + 2Pk$$

Ответ:  $P/4 + 2Pk$

$$1 + \sin(x)\cos(x) = 0$$

$$\sin(x)\cos(x) = -1$$

$$\sin x = 1$$

$$\cos x = -1$$

Или

$$\cos x = -1$$

$$\sin x = 1$$