

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

$$\sin x = a$$

$$\cos x = b$$

$$\sqrt{(a+b)^2} = b^2 - a^2$$

$$a+b = (b^2 - a^2)^2$$

$$a+b = ((b-a)(b+a))^2$$

$$(a+b) - (b-a)^2(b+a)^2 = 0$$

$$(b+a)(1 - (b-a)^2(b+a)) = 0$$

$$b+a=0$$

$$\sin x + \cos x = 0$$

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

$$\cos \frac{\pi}{4} = \frac{\sqrt{2}}{2}$$

$$\sin \frac{\pi}{4} = \frac{\sqrt{2}}{2}$$

$$a = \frac{\pi}{4}$$

$$\sqrt{2} \sin(x + \frac{\pi}{4}) = 0$$

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

$$x = \pi k - \frac{\pi}{4}$$

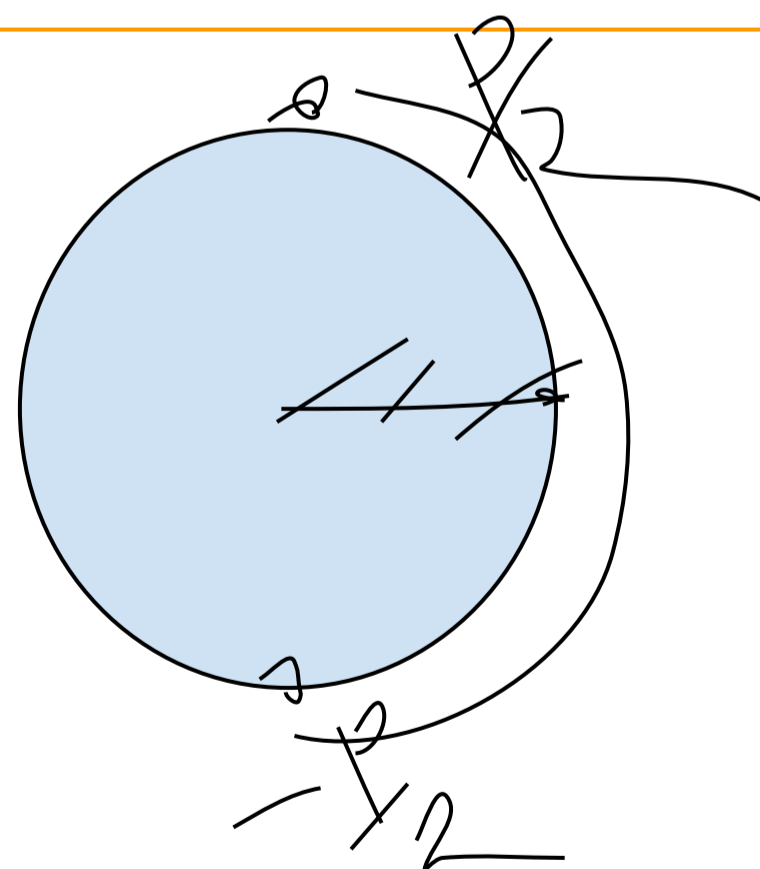
$$1 - (\cos x - \sin x)^2 (\cos x + \sin x) = 0$$

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

$$\cos x + \sin x = t$$

$$t^2 = 2 \sin x \cos x + 1$$

$$t^2 - 1 = 2 \sin x \cos x$$



$$\frac{\pi}{2} + 2\pi k \leq 2x \leq \frac{\pi}{2} + \pi k$$

$$-\frac{\pi}{4} + \pi k \leq x \leq \frac{\pi}{4} + \pi k$$

$$1 - (1 - (t^2 - 1)) * t = 0$$

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

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

$$t = 1$$

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

$$D = 1 + 4 = 5$$

$$t_1 = \frac{1 + \sqrt{5}}{2}$$

$$t_2 = \frac{1 - \sqrt{5}}{2}$$

$$\cos x + \sin x = 1$$

$$\sqrt{2} \sin(x + \frac{\pi}{4}) = 1$$

$$\sin(x + \frac{\pi}{4}) = \frac{1}{\sqrt{2}}$$

$$x + \frac{\pi}{4} = \frac{\pi}{4} + 2\pi k$$

$$x = 2\pi k$$

$$x + \frac{\pi}{4} = \frac{3\pi}{4} + 2\pi k$$

~~$$x = \frac{2\pi}{4} + 2\pi k$$~~

$$\cos x + \sin x = \frac{1 - \sqrt{5}}{2}$$

$$\sqrt{2} \sin(x + \frac{\pi}{4}) = \frac{1 - \sqrt{5}}{2}$$

$$\sin(x + \frac{\pi}{4}) = \frac{1 - \sqrt{5}}{2\sqrt{2}}$$

$$\sin(x + \frac{\pi}{4}) = \frac{(1 - \sqrt{5})\sqrt{2}}{2}$$

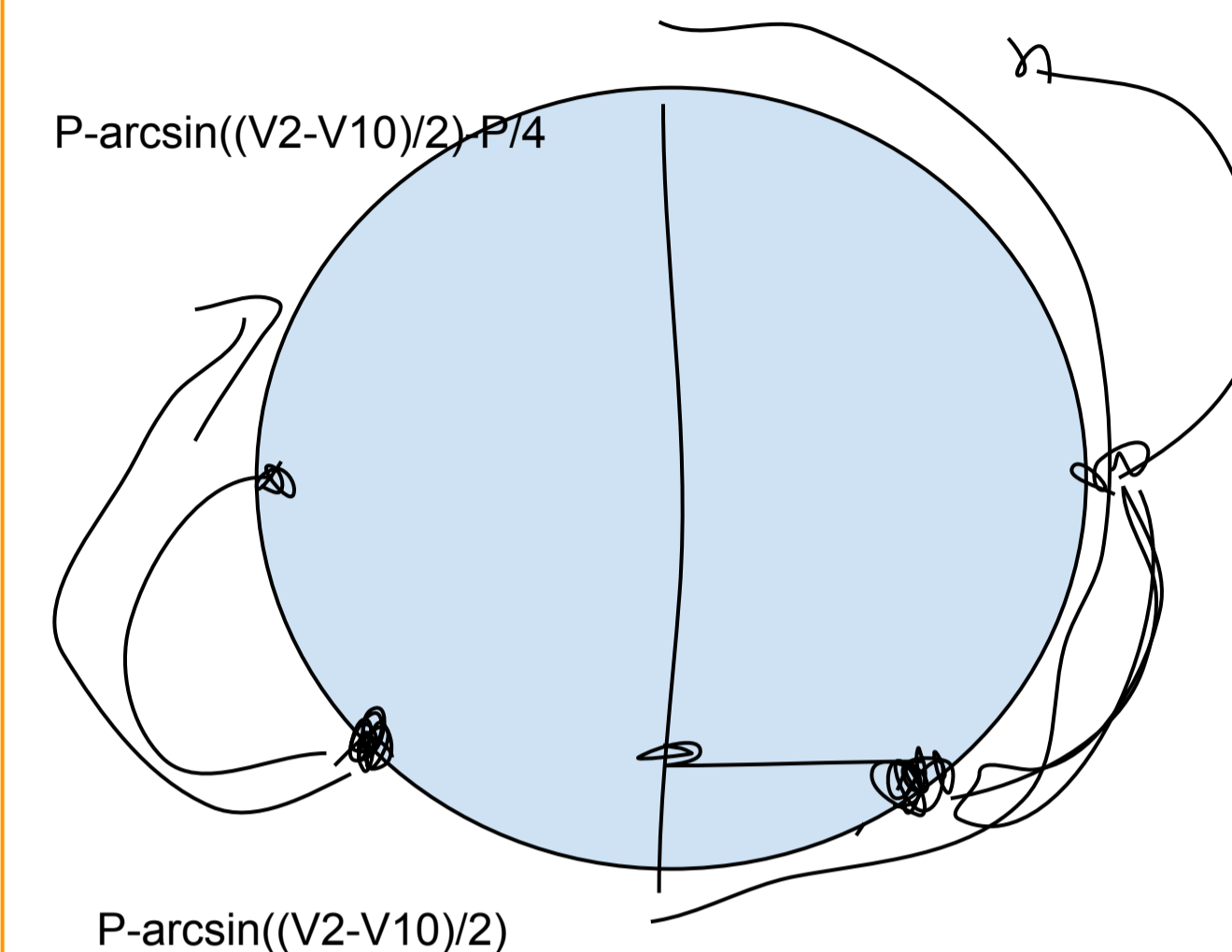
$$\sin(x + \frac{\pi}{4}) = \frac{\sqrt{2} - \sqrt{10}}{2}$$

$$x = \arcsin\left(\frac{\sqrt{2} - \sqrt{10}}{2}\right) - \frac{\pi}{4} + 2\pi k$$

$$x = \pi - \arcsin\left(\frac{\sqrt{2} - \sqrt{10}}{2}\right) - \frac{\pi}{4} + 2\pi k$$

$$\sin(x + \frac{\pi}{4}) = \frac{\sqrt{2} + \sqrt{10}}{2} > 1 \text{ не подходит}$$

$$\text{Ответ: } 2\pi k; \arcsin\left(\frac{\sqrt{2} - \sqrt{10}}{2}\right) - \frac{\pi}{4} + 2\pi k$$



	1	0	-2	1
1	1	1	-1	0