

$$V[\cos(x/1989) - \frac{1}{2}] + V[\cos x - \frac{1}{2}] = V[\cos(x/1989) + \cos x - 1]$$

$$\cos(x/1989) - \frac{1}{2} = a$$

$$\cos x - \frac{1}{2} = b$$

$$\cos(x/1989) + \cos x - 1 = a + b$$

$$V a + V b = V(a + b)$$

$$a + 2V a V b + b = a + b$$

$$a^2 + 2V a V b + b - a - b = 0$$

$$2V a V b = 0$$

$$V a V b = 0$$

$$a = 0$$

$$b \geq 0$$

$$b = 0$$

$$a \geq 0$$

$$\cos(x/1989) - \frac{1}{2} = 0$$

$$\cos(x/1989) = \frac{1}{2}$$

$$x/1989 = P/3 + 2Pn$$

$$x = \pm 1989P/3 + 3978Pn$$

$x = \pm 663P + 3978Pn$ решений нет

$$\cos x = \frac{1}{2}$$

$$x = \pm P/3 + 2Pk$$

$$\cos x/1989 \geq \frac{1}{2}$$

$$-663P + 3978Pn \leq (\pm P/3 + 2Pk) \leq -5967P + 3978Pn$$

$$-663P + 3978Pn - (\pm P/3) \leq 2Pk \leq -5967P + 3978Pn - (\pm P/3)$$

$$[-663P + 3978Pn - (\pm P/3)]/2P \leq k \leq [-5967P + 3978Pn - (\pm P/3)]/2P$$

Ответ: $\pm P/3 + 2Pk$, при k по неравенству выше

