

$$\cos^2(\pi/3 - 7x) = 1/2$$

$$x^2 = 1/2$$

$$x = \sqrt{2}/2 \quad x = -\sqrt{2}/2$$

$$\cos(\pi/3 - 7x) = \sqrt{2}/2$$

$$\cos(y) = \sqrt{2}/2$$

$$y = \pm \pi/4 + 2\pi k$$

$$-7x = -\pi/3 \pm \pi/4 + 2\pi k$$

$$x = \pi/21 \mp \pi/28 - 2\pi k/7$$

$$\cos(y) = -\sqrt{2}/2$$

$$y = \pm 3\pi/4 + 2\pi k$$

$$-7x = -\pi/3 \pm 3\pi/4 + 2\pi k$$

$$x = \pi/21 \mp 3\pi/28 - 2\pi k/7$$

Ответ: $\{\pi/21 \mp \pi/28 - 2\pi k/7\} \cup \{\pi/21 \mp 3\pi/28 - 2\pi k/7\}, k \in \mathbb{Z}$

$$\cos^2 x = (\cos 2x + 1)/2$$

$$\cos^2(\pi/3 - 7x) = 1/2$$

$$(\cos(2\pi/3 - 14x) + 1)/2 = 1/2$$

$$\cos(2\pi/3 - 14x) + 1 = 1$$

$$\cos(2\pi/3 - 14x) = 0$$

$$\cos(y) = 0$$

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

$$2\pi/3 - 14x = \pi/2 + \pi k$$

$$-14x = \pi/2 + \pi k$$

$$x = \pi/21 - \pi/28 - \pi k/14$$

$$x = (4\pi - 3\pi)/7 \cdot 4 \cdot 3 - \pi k/14$$

$$x = \pi/84 - \pi k/14$$

