

$$\cos^2\left(\frac{\pi}{3} - 7x\right) = \frac{1}{2}$$

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

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

$$\cos\left(\frac{\pi}{3} - 7x\right) = \frac{\sqrt{2}}{2}$$

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

$$y = \pm \frac{\pi}{4} + 2\pi k$$

$$-7x = -\frac{\pi}{3} + \pm \frac{\pi}{4} + 2\pi k$$

$$x = \frac{\pi}{21} \mp \frac{\pi}{28} - \frac{2\pi k}{7}$$

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

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

$$-7x = -\frac{\pi}{3} + \pm \frac{3\pi}{4} + 2\pi k$$

$$x = \frac{\pi}{21} \mp \frac{3\pi}{28} - \frac{2\pi k}{7}$$

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

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

$$\cos^2\left(\frac{\pi}{3} - 7x\right) = \frac{1}{2}$$

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

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

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

$$\cos(y) = 0$$

$$y = \frac{\pi}{2} + \pi k$$

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

$$-14x = \frac{\pi}{2} + \pi k$$

$$x = \frac{\pi}{21} - \frac{\pi}{28} - \frac{\pi k}{14}$$

$$x = \frac{(4\pi - 3\pi)}{7 \cdot 4 \cdot 3} - \frac{\pi k}{14}$$

$$x = \frac{\pi}{84} - \frac{\pi k}{14}$$

$$f^2 = g$$

