

$$\cos\left(\frac{n(4x-3)}{3}\right) = \frac{1}{2}$$

$$\frac{n(4x-3)}{3} = \frac{n}{3} + 2\pi n \quad | \cdot \frac{3}{n}$$

$$4x-3 = 1 + 6n$$

$$4x = 4 + 6n \quad | :4$$

$$x = 1 + \frac{3}{2}n$$

$$\text{при } n=0$$

$$x = 1$$

расширим свободу.

$$\begin{cases} 6x + 4y + 9 = 4x + 21 \\ 2x + 10 = 3 - 6x - 5y \end{cases} \Leftrightarrow$$

$$\begin{cases} 2x + 4y = 12 \quad | \cdot 4 \\ 8x + 5y = -7 \end{cases} \Leftrightarrow$$

$$\begin{cases} 8x + 16y = 48 \\ 8x + 5y = -7 \end{cases}$$

$$11y = 55$$

$$y = 5$$

$$2x + 20 = 12$$

$$2x = -8$$

Ответ:  $(-4; 5)$

$$\cos\left(\frac{n(8x+10)}{4}\right) = \frac{\sqrt{2}}{2}$$

$$\frac{n(8x+10)}{4} = \frac{n}{4} + 2\pi n \quad | \cdot \frac{4}{n}$$

$$8x+10 = 1 + 8n$$

$$8x = -9 + 8n \quad | :8$$

$$x = -\frac{9}{8} + n$$

$$n = 2$$

$$x = -\frac{9}{8} + \frac{16}{8} = \frac{7}{8}$$

$$\frac{n(8x+10)}{4} = -\frac{n}{4} + 2\pi n \quad | \cdot \frac{4}{n}$$

$$8x+10 = -1 + 8n$$

$$8x = -11 + 8n \quad | :8$$

$$x = -\frac{11}{8} + n$$

$$n = 2$$

$$x = -\frac{11}{8} + \frac{16}{8} = \frac{5}{8} \text{ — наименьший}$$

$$\frac{n(4x-3)}{3} = -\frac{n}{3} + 2\pi n \quad | \cdot \frac{3}{n}$$

$$4x-3 = -1 + 6n$$

$$4x = 2 + 6n \quad | :4$$

$$x = 0,5 + \frac{3}{2}n$$

$$\text{при } n=0 \Rightarrow$$

$$x = 0,5 \text{ — наименьший корень}$$

