Пример 14

$$\sin 4x - \cos 2x = 0$$

$$2\sin 2x\cos 2x - \cos 2x = 0$$

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

$$\left[\begin{array}{l} \cos 2x = 0, \\ 2\sin 2x - 1 = 0; \end{array}\right. \Leftrightarrow \left[\begin{array}{l} \cos 2x = 0, \\ \sin 2x = \frac{1}{2}; \end{array}\right. \Leftrightarrow$$

$$\left[\begin{array}{l} 2x = \frac{\pi}{2} + \pi n, n \in Z \\ 2x = (-1)^k \arcsin\frac{1}{2} + \pi k, k \in Z \end{array}\right. \Leftrightarrow \left[\begin{array}{l} x = \frac{\pi}{4} + \frac{\pi n}{2}, n \in Z \\ x = (-1)^k \frac{\pi}{12} + \frac{\pi k}{2}, k \in Z \end{array}\right.$$

Ответ : $\frac{\pi}{4} + \frac{\pi n}{2}, n \in Z; \quad (-1)^k \frac{\pi}{12} + \frac{\pi k}{2}, k \in Z.$