$$X_k \in X = \begin{cases} r_1 e^{j\phi_1 + \frac{2\pi}{4}n} & n = 0, \dots, 3 \\ r_2 e^{j\phi_2 + \frac{2\pi}{12}n} & n = 0, 1, \dots, 11 \end{cases}$$