



Problem 3. «Shuffle ballots»

In electronic voting, n voters take part. Each of them is assigned a **unique identifier** that is a number from the set $\{0, 1, \dots, n - 1\}$. Shuffling of ballots during elections is implemented through the encryption of identifiers. When encrypting, the following conditions must hold:

1. The encryption result is again an integer from $\{0, 1, \dots, n - 1\}$.
2. The encryption process must involve the block cipher AES with a fixed key K .
3. The number of requests to AES_K must be the same for each identifier.
4. In order to manage security assurances, it should be possible to customize the number of requests to AES_K .

Suggest a way how to organize the required encryption process of identifiers for $n = 5818342$ and $n = 5818343$. In other words, propose a method for organizing a bijective mapping from $\{0, 1, \dots, n - 1\}$ to itself that satisfies conditions described above.

