Problem Description

Costing Task

M groups engage in a game called Costing Task. N integers are distributed as an array to each group. A group can select a positive integer p and an index i from the range [0, N - 1] for each move. The total cost must be increased by the absolute difference between the initial value at index i and p. After that, users are able to switch the values of index i and p.
Each group's goal is to determine the fewest steps necessary to convert every integer in the array into a palindrome number.

A palindromic number is a number that remains the same when its digits are reversed. Example: 121,444,8,12345654321.

Constraints:

- $1 \le M \le 30$
- $1 \le N \le 10^3$
- $1 \le arr[i] \le 10^6$

Input:

- The first line contains the number of groups, *M*.
- For each group, there are two lines:
    - The first line contains the size of the array, *N*.
    - The second line contains *N* space-separated integers representing the elements of the array.

Output:

- For each group, print the minimum cost required to make all integers in the array equal to a palindrome number.