Duckburg

Scrooge McDuck (german: Dagobert Duck) runs a new lottery. To participate, players have to pay 25 Dollar. Then each participant chooses an integer between 1 and 1000 and gives it to Scrooge. After all participants have chosen, Scrooge chooses i integers between 1 and 1000. Now all participants get their winnings. For every participant, the closest 'Scrooge number' to the participant's number is determined. The absolute difference between the two numbers is what the participant gets in Dollar.

Write a program that maximizes Scrooge's winnigs / minimizes his losses.

Input: The first line contains $i \leq 100$, the second line contains $n \leq 1000$. Then n lines containing a number between 1 and 1000 each, which is the number that the participant chose. You can assume that all participants choose different numbers.

Output: An integer which is Scrooge's net total if he chooses his numbers optimally. The number is positive if he wins money and negative if he loses money.

Note: We ask for an optimal solution here. If we see a heuristic, we might upload new testcases into the running contest.

Sample Input:

```
10
11
1
2
3
4
5
6
7
8
9
10
11
```

Sample Output:

```
274
```