# D. Two Melodies

time limit per test: 2 seconds memory limit per test: 256 megabytes

input: standard input output: standard output

Alice is a beginner composer and now she is ready to create another masterpiece. And not even the single one but two at the same time!

Alice has a sheet with n notes written on it. She wants to take two such non-empty non-intersecting subsequences that both of them form a melody and sum of their lengths is maximal.

Subsequence is a sequence that can be derived from another sequence by deleting some elements without changing the order of the remaining elements.

Subsequence forms a melody when each two adjacent notes either differs by 1 or are congruent modulo 7.

You should write a program which will calculate maximum sum of lengths of such two non-empty non-intersecting subsequences that both of them form a melody.

## Input

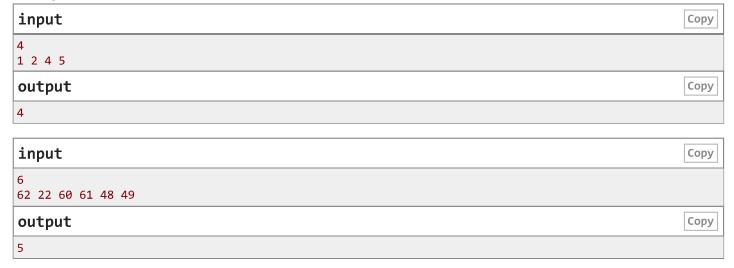
The first line contains one integer number n ( $2 \le n \le 5000$ ).

The second line contains n integer numbers  $a_1, a_2, ..., a_n$  ( $1 \le a_i \le 10^5$ ) — notes written on a sheet.

### Output

Print maximum sum of lengths of such two non-empty non-intersecting subsequences that both of them form a melody.

### **Examples**



#### **Note**

In the first example subsequences [1, 2] and [4, 5] give length 4 in total.

In the second example subsequences [62, 48, 49] and [60, 61] give length 5 in total. If you choose subsequence [62, 61] in the first place then the second melody will have maximum length 2, that gives the result of 4, which is not maximal.