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# Nasty Donchik

Input file:            **standard input**  
Output file:           **standard output**  
Time limit:            1.5 seconds  
Memory limit:         256 megabytes

Batyr had his birthday recently and Tima sent him a unique gift - a sequence  $A$  of  $N$  integers. Batyr enjoyed the gift very much and immediately started analyzing the properties of the given sequence. Most of all, he is interested in *beautiful triplets*: triplets  $(i, j, k)$  so that  $1 \leq i \leq j < k \leq n$  and each number present in the segment of the sequence from  $i$  to  $j$  (both ends inclusive) is also present in the segment from  $j + 1$  to  $k$  and vice versa (look at the 'Notes' section for further clarification).

Batyr had been meticulously counting the number of such triplets, but nasty Donchik deleted all his records. Help Batyr — count the number of *beautiful triplets* using his sequence.

## Input

The first line of the input contains a single integer  $N$  — the size of Batyr's sequence. The next line contains  $N$  integers,  $i$ -th describing the  $i$ -th element of the sequence  $a_i$  ( $1 \leq a_i \leq N$ ).

## Output

Output a single integer — the number of *beautiful triplets*.

## Scoring

This task is made up of 7 subtasks, that meet the following constraints:

1.  $N \leq 100$ . Worth 5 points.
2.  $N \leq 500$ . Worth 7 points.
3.  $N \leq 5000$ . Worth 12 points.
4.  $N \leq 2 \times 10^5$ ,  $1 \leq a_i \leq 2$ , for each  $1 \leq i \leq N$ . Worth 12 points.
5.  $N \leq 2 \times 10^5$ ,  $1 \leq a_i \leq 50$ , for each  $1 \leq i \leq N$ . Worth 12 points.
6.  $N \leq 2 \times 10^5$ , each number in  $A$  is present exactly twice. Worth 12 points.
7.  $N \leq 2 \times 10^5$ . Worth 40 points.

## Examples

| standard input            | standard output |
|---------------------------|-----------------|
| 5<br>1 2 2 2 1            | 6               |
| 10<br>1 2 1 1 2 1 2 2 2 1 | 66              |

## Note

The answer to the first test is the following triplets:

1. (1, 2, 5)
2. (1, 3, 5)
3. (2, 2, 3)
4. (2, 2, 4)
5. (2, 3, 4)
6. (3, 3, 4)