

# Fibonacci Fusion

Input file:            standard input  
Output file:           standard output  
Time limit:            4 seconds  
Memory limit:         1024 megabytes

The Fibonacci numbers are 0, 1, 1, 2, 3, 5, 8, 13, 21, ... – each number (except the first two) is the sum of the two previous numbers.

You are given  $N$  numbers  $a_i$ . Count the pairs  $i < j$  such that  $a_i + a_j$  is a Fibonacci number.

## Input

The first line of the input contains an integer  $N$  ( $1 \leq N \leq 200\,000$ ).

Each of the next  $N$  lines contains an integer  $a_i$  ( $1 \leq a_i < 10^{2\,000\,000}$ ). The total number of digits in these numbers does not exceed 5 000 000.

## Output

Output a single integer – the number of pairs that sum to a Fibonacci number.

## Example

standard input	standard output
6 50 8 8 5 72 354224848179261915070	4

## Note

There are 4 such pairs:

- $a_2 + a_4 = 8 + 5 = 13$
- $a_3 + a_4 = 8 + 5 = 13$
- $a_1 + a_4 = 50 + 5 = 55$
- $a_4 + a_6 = 5 + 354224848179261915070 = 354224848179261915075$