Priyanka and Toys

HackerRank

Problem Statement

Little Priyanka visited a kids' shop. There are N toys and their weight is represented by an array $W = [w_1, w_2, \ldots, w_N]$. Each toy costs 1 unit, and if she buys a toy with weight w', then she can get all other toys whose weight lies between $[w', w' + 4]$ (both inclusive) free of cost.

Input Format

The first line contains an integer N i.e. number of toys.
Next line will contain N integers, $w_1, w_2, \ldots, w_N$, representing the weight array.

Output Format

Minimum units with which Priyanka could buy all of toys.

Constraints
$1 \leq N \leq 10^5$
$0 \leq w_i \leq 10^4, where\ i \in [1, N]$

Sample Input

```
5
1 2 3 17 10
```

Sample Output

```
3
```

Explanation

She buys 1^{st} toy with weight 1 for 1 unit and gets 2^{nd} and 3^{rd} toy for free since their weight lies between $[1, 5]$. And she has to buy last two toys separately.