

Priyanka and Toys



Priyanka works for an international toy company that ships by container. Her task is to determine the lowest cost way to combine her orders for shipping.

She has a list of item weights. The shipping company has a requirement that all weights loaded together must be less than or equal to 4 units plus the minimum weight item.

What is the smallest number of containers that can be contracted to ship the items based on the given list of weights.

Input Format

The first line contains an integer N , the number of toys.

Next line will contain N integers, w_1, w_2, \dots, w_N , representing the weight array.

Output Format

Minimum containers Priyanka must contract to ship all of the toys.

Constraints

$$1 \leq N \leq 10^5$$

$$0 \leq w_i \leq 10^4, \text{ where } i \in [1, N]$$

Sample Input

```
8
1 2 3 21 7 12 14 21
```

Sample Output

```
4
```

Explanation

The first container holds items weighing **1**, **2** and **3**. (weights in range **1...5**) The second container holds the items weighing **21** units. (range **17...21** or **21...25**) The third container holds the item weighing **7** units. (range **3...7** or **7...11**) The fourth container holds the items weighing **12** and **14** units. (range **12...16** or **10...14**)

4 containers are required.