

Maximum Groups

Assignment 1

Computer Programming

Due date: 10 September, 2018

Description: Akshay has become the head of a new sale. There are different types of items involved in the sale. The cost of each of these items is of the form 2^x .

You need to find the maximum groups you can form out of these items.

One item can occur in only one group.

A group contains exactly 3 items. Also, the combined price of any two items of the group should be greater than the third.

Note: Prices of Items in a group follow certain property for this question and in order to maximize the count of the groups, try including as many items as possible.

Input

First line of input contains a single integer N.

Second line contains N integers, where i^{th} integer represents p_i , the number of items with price 2^{i-1} .

Output

Print the maximum groups you can form out of these items.

Constraints

N is an integer between 1 and 10^5 (Both Inclusive).

p_i is an integer between 1 and 10^9 (Both Inclusive).

Sample Test Case

Input	Output
4 1 1 3 2	2

Explanation

In the given test case one item of price 1 can form a group with 2 items of price 4, and one item of price 4 can form group with 2 items of price 8. This way we obtain 2 groups.