L: Taking Out the Trash

Time Limit: 3 seconds, Memory limit: 2G

Peter has way too much trash and he needs to take it all out.

Specifically, there are n bags of trash each with a specific weight. Peter can hold either one or two bags of trash per trip, and he can carry a maximum total of m milligrams of trash in a single trip. What is the minimum number of trips Peter needs to take to take out all the trash?

Input

The input starts with two integers n $(1 \leq n \leq 5 \cdot 10^5)$ and m $(1 \leq m \leq 10^9)$, the number of bags of trash and the maximum weight of trash Peter can carry.

The next line contains n integers, w_i $(1 \leq w_i \leq m)$, the weight of each bag of trash in milligrams.

Output

Output the minimum number of trips Peter needs to make to take out all the trash.

Sample Input 1	Sample Output 1
4 1000 100 900 200 900	3

Sample Input 2	Sample Output 2
4 10 1 2 3 4	2

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