Bins and Balls

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

You have several balls of n different colors. For each color i from 1 to n, there are exactly x_i balls of this color. You are playing a game which is a sequence of actions. In one action, you can take exactly k balls of pairwise distinct colors and throw them away. What is the maximum number of actions that you can make?

Input

The first line contains two integers n and k: the number of colors and the number of balls that you throw away in each action ($1 \leq k \leq n \leq 2 \cdot 10^5$). The second line contains n space-separated integers x_i: the number of balls of the i-th color ($1 \leq x_i \leq 10^9$).

Output

Print a single line with one integer: the maximum possible number of actions you can make.

Examples

standard input	standard output
4 3 5 8 9 4	8
10 5 1 2 3 4 5 6 239 239 239 239	21