

7 Grandma's 100th Birthday

Your grandma made it to 100 years old! To celebrate this amazing accomplishment, your dad went to the farmers market to buy grandma a bunch of cakes for her party. He picked up N long rectangular cakes, each with varying lengths.

Every person at the party, to be fair, will receive exactly one slice, and all cake sizes need to be exactly the same length. You are tasked to create all the fair slices. You are not allowed to combine any pieces of different cakes together. Any leftover cake is thrown away.

There is one major problem though. Your dad doesn't have a knife, so he went and bought one at the gas station and its plastic and cheap. This knife is fragile and will snap after exactly M cuts.

If it is impossible to give everyone one equal slice, return 0.

7.1 Input

The input consists of two separate lines of data, the second being the cake sizes. The first line is as follows:

- An integer N , the number of cakes
- An integer K , the number of people coming to the party
- An integer M , the maximum amount of cuts the knife can make

The second line contains N space separated integers $c_1, c_2, c_3, \dots, c_n$.

7.2 Output

Print a single integer representing the maximum size of the slice which allows every family member to have one equal slice. Print 0 if it's impossible.

7.3 Sample Input/Output

Sample Input	Sample Output
3 6 4 10 15 20	5
3 5 4 8 13 20	5
1 10 5 100	0