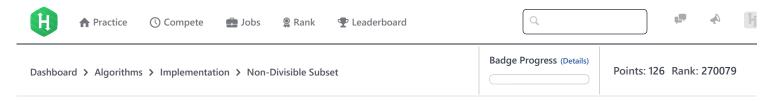
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Non-Divisible Subset





Given a set, S_i , of n distinct integers, print the size of a maximal subset, S', of S where the sum of any n numbers in n is n evenly divisible by n.

Input Format

The first line contains 2 space-separated integers, n and k, respectively.

The second line contains n space-separated integers (we'll refer to the i^{th} value as a_i) describing the unique values of the set.

Constraints

- $1 \le n \le 10^5$
- $1 \le k \le 100$
- $1 \le a_i \le 10^9$
- All of the given numbers are distinct.

Output Format

Print the size of the largest possible subset (S').

Sample Input

4 3

1 7 2 4

Sample Output

3

Explanation

The largest possible subset of integers is $S' = \{1,7,4\}$, because no two integers will have a sum that is evenly divisible by k = 3:

- 1+7=8, and 8 is not evenly divisible by 3.
- 1+4=5, and 5 is not evenly divisible by 3.
- 7+4=11, and 11 is not evenly divisible by 3.

The number $\bf 2$ cannot be included in our subset because it will produce an integer that is evenly divisible by $\bf k=3$ when summed with any of the other integers in our set:

- 1+2=3, and $\frac{3}{3}=1$ (remainder 0)
- 4+2=6, and $\frac{6}{3}=2$ (remainder 0).
- 7+2=9, and $\frac{9}{3}=3$ (remainder 0).

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Thus, we print the length of S' on a new line, which is 3.

f in Submissions:28502
Max Score:20
Difficulty: Medium
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More

```
Current Buffer (saved locally, editable) & 🗘
                                                                                           Java 7
 1 ▼ import java.io.*;
 2 import java.util.*;
 3 import java.text.*;
 4 import java.math.*;
 5 import java.util.regex.*;
 6
 7 ▼ public class Solution {
 8
        public static void main(String[] args) {
 9 ▼
            /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
10 ▼
11
12 }
                                                                                                                    Line: 1 Col: 1
                                                                                                       Run Code
                                                                                                                     Submit Code
                      Test against custom input
1 Upload Code as File
```

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