

Problem F. GCD

Input file: *standard input*
Output file: *standard output*
Time limit: 4 seconds
Memory limit: 512 mebibytes

You are given an array of integers a_1, a_2, \dots, a_n .

Find the maximum possible greatest common divisor of all numbers from the array if you can erase no more than k elements ($k \leq \frac{n}{2}$) from this array.

Input

The first line contains two integers: n , the number of elements in the array, and k , the maximum number of elements you can erase ($2 \leq n \leq 10^5$, $0 \leq k \leq \frac{n}{2}$).

The second line contains n integers a_1, a_2, \dots, a_n : the array a ($1 \leq a_i \leq 10^{18}$).

Output

Print the maximum possible greatest common divisor of all elements of the array after erasing no more than k elements.

Examples

standard input	standard output
4 1 6 15 35 14	1
4 2 6 15 35 14	7
3 1 897612484786617600 5828 16027	1457