Modulo

Input file: `standard input`
Output file: `standard output`

You are given a 1-indexed positive integer array a of length n and a positive integer x. You can rearrange all elements of this array as you wish. Then you should perform the operation $x \leftarrow x \bmod a_i$ in order from 1-th to n-th.

Your task is to rearrange the array in such a way that x is the maximum possible after n operations.

Input

The first line contains one integer n ($1 \le n \le 21$) — the length of the array.

The second line contains n space-separated positive integers a_i ($1 \le a_i \le 10^{18}$) — the elements of the array.

The third line contains one integer x ($1 \le x \le 10^{18}$) — the number to perform operations.

Output

Print a single integer in one line — the maximum value of x to the problem.

Examples

standard input	standard output
3 5 6 7 15	3
4 20 21 22 10 107	9
5 5 6 7 8 9 1000000000000	4