CODEFORCES
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| Ahmed_Essam_Yassin | Logout

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ITMO Academy: pilot course » Binary Search » Step 5 » Practice

C. K-th Sum

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

There are two arrays a and b, each of which consists of n integers. For each pair of numbers $(i, j) : 1 \le i, j \le n$, write out the sum $a_i + b_j$. Find in the resulting set of sums the k-th in ascending order.

Input

The first line contains integers n and k ($1 \le n \le 10^5$, $1 \le k \le n^2$). The second line contains the elements of array a, the third line contains the elements of array b. All array elements are positive integers, no more than 10^9.

Output

Print one number, the required k-th sum.

Example

input	Copy
5 10 4 2 6 4 8 7 3 1 9 5	

output	Copy
9	

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Language: GNU G++20 13.2 (64 bit, win

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