Find the closest number to the given number

NOTE: Use vector while solving this. Do not use traditional array or dynamic array.

Sorted list of integers is given. Find a number from the list which is closest to the given number. When two numbers in the given list are at the same distance from the given number then choose the smaller number as an answer.

Input Format
First line contains count of integers in the sorted list (***n***)

Second line contains space separated integers in sorted order

Third line contains space separated numbers to be searched in second line.

Constraints
1 <= ***n*** <= 4,000,000

1 <= count of numbers to find <= 400,000

-2,147,483,647 <= Each number in the second and third line of the input <= 2,147,483,647

All the numbers in the first line will be unique

Output Format

One line containing space separated numbers (from first line in the input) which are closest to the respective number in the second line of the input.

Sample Input 0
5
-20 3 4 6 10
-20000 -19 3 5 9 1000
Sample Output 0
-20 -20 3 4 10 10

```cpp
#include <vector>
#include <iostream>
using namespace std;


int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}
```