**Bitwise complement**

There is number of elements in a List. All the items of List are positive integers. Find bitwise complement of all the items of List and check if sum of all item's complements is include 0(Zero) or not.

**Input Format**

Space separated elemets

**Constraints**

None

**Output Format**

YES, if sum of bitwise complements is include 0(Zero) otherwise NO.

**Sample Input 0**

2 10 5

**Sample Output 0**

YES

## The Soap Mystery

Cool boy goes to buy soap from a shop.The shop contains N soaps. The prices of soap are given in the form of an array A. The price of ith soap is A[i]. Now cool boy has q queries, in each query he wants to know the number of soaps that have price less than the given amount M.

**Input Format**

First line contains integer N total number of soaps available in the shop.

Second line contains N space separated integers.

Third line contains Q number of queries.

Each of the next Q lines contain integer M.

**Constraints**

1 ≤ N ≤ 100000

1 ≤ A[i] ≤ 1000000000

1 ≤ Q ≤ 100000

1 ≤ M ≤ 100000

**Output Format**

For each query output number of soaps having price less than M for that query.

**Sample Input 0**

5

1 4 10 5 6

4

2

3

5

11

**Sample Output 0**

1

1

2

5