

# Pair Sum

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Problem Code	hw03a_pairsum
Running Time Limit	1 sec
Memory Limit	16 mb

## Objective

- Be able to solve problem using divide & conquer technique or better.

## Introduction

Given an array  $A$  of real numbers (not necessary sorted), your task is to identify whether there exists distinct indices  $i$  and  $j$  such that  $A[i] + A[j]$  equal to a specific real value  $val$ . For each problem there will be  $M$  queries of  $val$ . For each query, you have to indicate whether there exist such pair.

## Task

Indicate whether there is a pair of distinct element in the array  $A$  such that their summation equal to specific values.

## Input

The first line of input contains two number  $N$  and  $M$  where  $N$  ( $2 \leq N \leq 10,000$ ) is the size of the array and  $M$  ( $1 \leq M \leq 100$ ) is the number of queries. The following line contains  $N$  real values which is the elements of the array. This is followed by  $M$  more lines, each line contain a real value that represent each query.

## Output

There must be exactly  $M$  lines. Each line corresponds to each query in the input. For each query, a word "YES" must be printed if there is a pair whose summation equal to the value of the query. Print "NO" otherwise.

## Example

### Ex1

Input	Output
4 5	YES
10.1 9.2 1.5 4.3	NO
19.3	NO
19.4	YES
19.2	NO
5.8	
5.9	