There are two n-element arrays of integers, A and B. Permute them into some A' and B' such that the relation $A'[i] + B'[i] \geq k$ holds for all i where $0 \leq i < n$.

There will be q queries consisting of A, B, and k. For each query, return YES if some permutation A', B' satisfying the relation exists. Otherwise, return NO.

Example

$A = [0, 1]$
$B = [0, 2]$
$k = 1$

A valid A', B' is $A' = [1, 0]$ and $B' = [0, 2]$: $1 + 0 \geq 1$ and $0 + 2 \geq 1$. Return YES.

Function Description

Complete the twoArrays function in the editor below. It should return a string, either YES or NO.

twoArrays has the following parameter(s):

- int k: an integer
- int A[n]: an array of integers
- int B[n]: an array of integers

Returns

- string: either YES or NO

Input Format

The first line contains an integer q, the number of queries.

The next q sets of 3 lines are as follows:

- The first line contains two space-separated integers n and k, the size of both arrays A and B, and the relation variable.
- The second line contains n space-separated integers $A[i]$.
- The third line contains n space-separated integers $B[i]$.

Constraints

- $1 \leq q \leq 10$
- $1 \leq n \leq 1000$
- $1 \leq k \leq 10^9$
- $0 \leq A[i], B[i] \leq 10^9$

Sample Input

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STDIN   Function
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2       q = 2
3 10    A[] and B[] size n = 3, k = 10
2 1 3   A = [2, 1, 3]
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7 8 9 B = [7, 8, 9]
4 5 A[] and B[] size n = 4, k = 5
1 2 2 1 A = [1, 2, 2, 1]
3 3 3 4 B = [3, 3, 3, 4]

Sample Output

YES
NO

Explanation

There are two queries:

1. Permute these into $A' = [1, 2, 3]$ and $B' = [9, 8, 7]$ so that the following statements are true:
   - $A[0] + B[1] = 1 + 9 = 10 \geq k$
   - $A[1] + B[1] = 2 + 8 = 10 \geq k$
   - $A[2] + B[2] = 3 + 7 = 10 \geq k$
2. $A = [1, 2, 2, 1]$, $B = [3, 3, 3, 4]$, and $k = 5$. To permute A and B into a valid A' and B', there must be at least three numbers in A that are greater than 1.