Permuting Two Arrays



Consider two n-element arrays of integers, $A=[A[0],A[1],\ldots,A[n-1]$ and $B=[B[0],B[1],\ldots,B[n-1]]$. You want to permute them into some A' and B' such that the relation $A'[i]+B'[i]\geq k$ holds for all i where $0\leq i < n$. For example, if A=[0,1], B=[0,2], and k=1, a valid A',B' satisfying our relation would be A'=[1,0] and B'=[0,2], $1+0\geq 1$ and $0+2\geq 1$.

You are given q queries consisting of A, B, and k. For each query, print YES on a new line if some permutation A', B' satisfying the relation above exists. Otherwise, print NO.

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):

- k: an integer
- A: an array of integers
- B: an array of integers

Input Format

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

The next ${\it q}$ sets of ${\it 3}$ 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.
- ullet The second line contains n space-separated integers A[i].
- The third line contains n space-separated integers B[i].

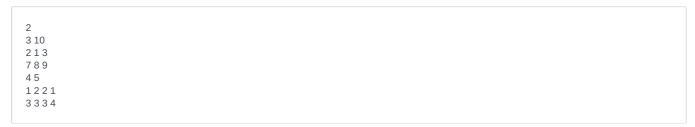
Constraints

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

Output Format

For each query, print YES on a new line if valid permutations exist. Otherwise, print NO.

Sample Input



Sample Output

Explanation

We perform the following two queries:

1. A = [2, 1, 3], B = [7, 8, 9], and k = 10. We permute these into A' = [1, 2, 3] and B' = [9, 8, 7] so that the following statements are true:

•
$$A[0] + B[1] = 1 + 9 = 10 \ge k$$

•
$$A[1] + B[1] = 2 + 8 = 10 \ge k$$

•
$$A[2] + B[2] = 3 + 7 = 10 \ge k$$

Thus, we print YES on a new line.

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', we would need at least three numbers in A to be greater than 1; as this is not the case, we print NO on a new line.