

Through the tunnel

There is a tunnel of length L Height H and Width of 1 unit. Some blocks of Length 1 unit width 1 unit and variable height are placed across the entire length of the tunnel. The blocks are placed either at the base of the tunnel or suspended from the top.

A small plane has to fly through the tunnel while navigating the blocks. Assume that the plane can fit into the tunnel and has enough thrust to go above or below the obstacles.

You are given 2 arrays of length N , first array represents height of blocks placed at base, and second array represents heights of blocks suspended from top. If height is 0 it means no block is placed at that location. You need to help decide if the tunnel can be crossed.

Input Format:

Each input contains the following :

An integer L and H , length of structure and height of structure. ($1 \leq L, H \leq 10^5$)

Next Line have L integers denoting **Height of blocks placed at base.**

Next Line has L integers denoting **Height of height of blocks suspended from top.**

Output Format:

- Output will be '**YES**' or '**NO**' indicating if the plane can pass through the tunnel.

Example Test Case 1:

Input:

6 4
1 2 1 3 1 1
1 1 0 0 0 2

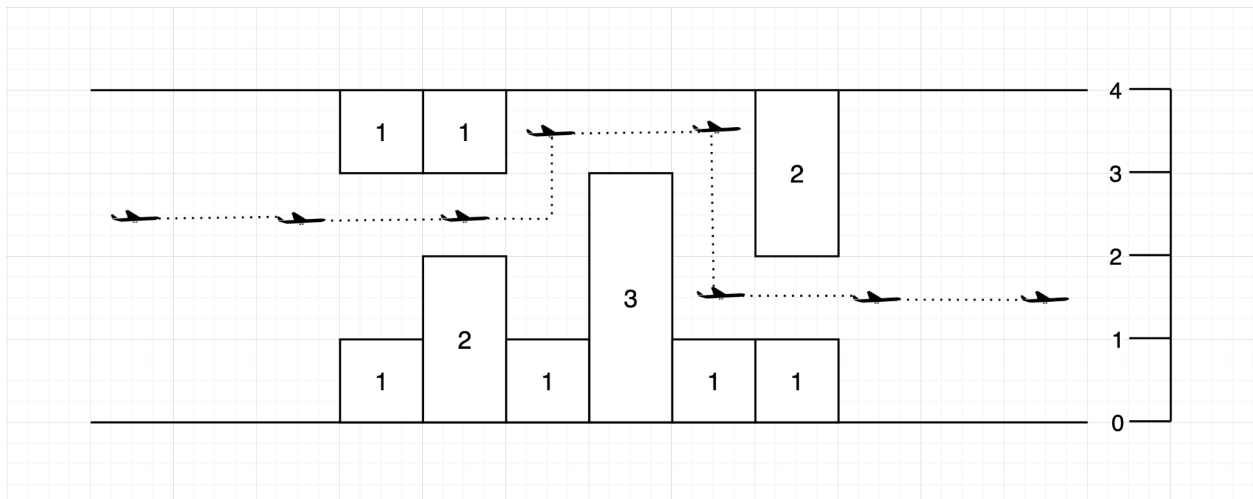
Output:

YES

Explanation:

In the above case we can see plane can go through the tunnel easily as there is no blocker.

Diagram (Depiction of the input of the program):



Example Test Case 2:

Input:

5 8
1 2 2 4 3
2 1 2 3 2

Output:

YES

Explanation:

In the above case we can see plane can go through the tunnel easily as there is no blocker.

Example Test Case 3:

Input:

5 8
1 7 2 4 3
2 1 2 3 2

Output:

NO

Explanation:

The tunnel will be blocked at index 2, as there is a block with height 1 and another at the same index suspended from the top with height 7.