

# Storm

It's widely known that the fibonacci sequence is associated to natural phenomena, in the case of atmospherics and great storms, within its patterns there are fibonacci numbers.

As we should know, the fibonacci sequence starts in 0 and 1, these numbers belong to the  $X_0$  y  $X_1$  being  $X_2$  The sum of the two previous numbers, we are considering that  $F(0) = 1$  and  $F(1) = 2$ , that is:

**1 2 3 5 8 13 21 ...**

We are developing a new method of storm detection according to studies applying the fibonacci sequence, if there is data in the storm of at least K fibonacci consecutive numbers we consider the storm of grade K.

We need that, given the set of numbers in a storm and any K, you must affirm or deny if such storm is at least grade K

## INPUT DETAILS

The first line contains two integers N and M that denotes the dimension of the matrix, followed by the data of storm given in N lines with M numbers in each line, separated by a space, then, the number K that it's the grade to evaluate.

## OUTPUT DETAILS

You must print "YES" if the grade of storm is at least K, print "NO" otherwise.

INPUT	OUTPUT
3 4 2	YES
1 5 4 8	
9 2 7 3	
5 4 1 6	

## CONSTRAINTS

$$0 < K \leq 40$$

$$0 < N, M \leq 1000$$