

# Secret

Petra Pobre wishes to open a secret room in her school, but the security system consists in a puzzle that is formed by a matrix of size  $N \times M$ , then, for each column you will have  $N$  numbers in any order, to solve the puzzle, you must observe a particular number  $K$  that can be found besides the matrix size, to open the door, Petra needs to shout the minimum moves that she needs to make so that every observed number  $K$  found in every column is aligned at the first row.

Every column in the matrix can be moved up or down, by instance.

$N=4$   $M=3$   $K=2$ ;

1 2 3

3 1 2

2 8 4

3 3 5

In the first column the number  $K$  moves two units up, in the second column the number is in position and in the last column it goes one unit up, therefore, the result is 3.

## Input details:

There are three integers to read;  $N, M$  and  $K$ , everyone corresponding to the number of columns and rows in the matrix with the number to move, the next  $N$  lines will contain  $M$  integers separated by a single space representing the number in a position of the matrix  $(i, j)$

## Output details:

You should print the minimum moves so that the condition described previously is satisfied.

INPUT	OUTPUT
4 3 2 1 2 3 3 1 2 2 8 4 3 3 5	3

## Constraints:

$0 < N, M < 1500$

$0 < K < 2000$