

(1) There is a board of **NxM** size. Each cell of the board is either

- (a) 'x' : the cell is blocked
- (b) 'o' : the cell is free
- (c) 's' : starting cell
- (d) 'e' : exit cell

Starting and ending cells are also considered free.

There is a king (a chess piece) on the board occupying the start cell. Can you find the minimum number of moves required to reach the exit cell ?

Sample Input

4 4
oxox
sxoe
oxxo
oooo

Sample Output

5

Explanation:

The first line contains N, M.

Here N = 4, M = 4

The optimal movements of the kings are shown in the following,

oxox		oxox		oxox		oxox		oxox		oxox		oxox
s xoe	→	sxoe	→	sxoe	→	sxoe	→	sxoe	→	sxoe	→	sxoe
oxxo		o xxo		oxxo		oxxo		oxxo		oxxo		oxxo
oooo		oooo		o ooo		oooo		oooo		oooo		oooo

(2) You are given an array **A** of positive integers of size **N**. The array is 0-indexed.

You start with index 0.

When you are at index i, you can jump to index i-A[i] or i+A[i] if the index is within the array.

Is it possible to reach the last index (N-1) ?

Sample Input

5
2 3 1 3 2

Sample Output

YES

3
1 2 1

NO

Explanation:

For sample-1: To reach 4th index from 0th index, you may follow this path:

0 -> 2 -> 1->3

You start at the 0th index. As $A[0] = 2$, you can jump to index $(0-2) = -2$ or $(0+2) = 2$. But -2 is out of the array, so you can only jump to the 2nd index.

When you are at 2nd index, As $A[2] = 1$, you can jump to index $(2-1) = 1$ or $(2+1) = 3$. To reach the last index you jump to the 1st index.

When you are at 1st index, As $A[1] = 3$, you can jump to index $(1-3) = -2$ or $(1+3) = 4$. To reach the last index you jump to the 4th index.

For sample-2: It's not possible to reach the last index

- (3) Given a bidirectional unweighted graph, find the number of connected components in the graph.

Input Format:

First line contains two integers, N = number of nodes, M = number of edges.
Each of the next M lines contain two integers U, V denoting there is an edge between node U and node V .

Sample Input

6 4

1 2

2 5

3 6

5 1

Sample Output

3

Explanation:

The graph has 3 connected components,

(a) 1, 2, 5

(b) 3, 6

(c) 4