Tom and Jerry Maze Adventure

Tom and Jerry have found themselves in a perplexing maze, and Jerry is lost somewhere inside! Help Tom navigate through the maze to find Jerry. The maze is represented as a grid where Tom starts at one point and Jerry is hidden at another. Tom can move left, right, up, or down in search of Jerry. Can you guide Tom to reunite with Jerry in this thrilling maze adventure?

First, print "YES" if there is a path from Tom to Jerry, and "IMPOSSIBLE" otherwise. If there is a path, print the length of the shortest such path. Let the chase begin!

Input Format

- The first input line contains two integers, n and m, representing the height and width of the maze.
- Then follow n lines of m characters describing the maze. Each character is "."(paths that can walk), "#" (wall), "T" (Tom's starting position), or "J" (Jerry's hiding spot). There is exactly one "T" and one "J" in the input.

Constraints

- $1 \leq \mathbf{n}, \mathbf{m} \leq 10001$

Output Format

- First print "YES", if there is a path, and "IMPOSSIBLE" otherwise.
- If there is a path, print the length of the shortest such path

Sample Input 0

```
10 10
##.T######
#.##.##.##
#####..###
.#########
.########.
###.###.##
########.
######.#.#
###..###.#
###.J#####
```

Sample Output 0

```
IMPOSSIBLE
```

Sample Input 1

```
5 8
########
#.T#...#
```

```
#.##.#J#
#......#
########
```

Sample Output 1

```
YES
9
```