## Kate's Way Out

*Kate is stuck into a maze. You should help her to find her way out.*

On the **first line** you will be given how many **rows** there are in the maze. On the **next n lines** you will be given the **maze itself**. Here is a legend for the maze:

* **"#"** - means a **wall**; Kate cannot go through there
* **" "** - means **empty** space; Kate can go through there
* **"k"** - the initial **position of Kate**; start looking for a way out from there

There are two options: Kate either gets out or not. If Kate **can get** out print the following:   
**"Kate got out in {number\_of\_moves} moves"**. Otherwise, print: **"Kate cannot get out"**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 4  ######  ## k#  ## ###  ## ### | Kate got out in 5 moves |
| 5  ######  ## k#  ## ###  ######  ## ### | Kate cannot get out |