# Folding a Cube <br> Problem ID: foldingacube <br> Time limit: 1 second 

It is well known that a set of six unit squares that are attached together in a "cross" can be folded into a cube.


But what about other initial shapes? That is, given six unit squares that are attached together along some of their sides, can we form a unit cube by folding this arrangement?

## Input

Input consists of 6 lines each containing 6 characters, describing the initial arrangement of unit squares. Each character is either a ., meaning it is empty, or a \# meaning it is a unit square.

There are precisely 6 occurrences of \# indicating the unit squares. These form a connected component, meaning it is possible to reach any \# from any other \# without touching a . by making only horizontal and vertical movements. Furthermore, there is no $2 \times 2$ subsquare consisting of only \#. That is, the pattern

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##
##
```

does not appear in the input.

## Output

If you can fold the unit squares into a cube, display can fold. Otherwise display cannot fold.

## Sample Input 1 Sample Output 1

| $\ldots \ldots$ | cannot fold |
| :--- | :--- |
| $\ldots \ldots \ldots$ |  |
| \#\#\#\# |  |
| $\ldots \ldots$. |  |
| $\ldots \ldots$ |  |

## Sample Input 2

Sample Output 2

| $\ldots \ldots$. | can fold |
| :--- | :--- |
| \#. . . . |  |
| \#\#\#. |  |
| \#... |  |
| $\ldots \ldots$. |  |
| $\ldots \ldots$. |  |


| Sample Input 3 | Sample Output 3 |
| :---: | :---: |
| . . \#\#. . | cannot fold |
| . . . \#. . |  |
| . . \#\#. . |  |
| . . . \# . . |  |
| . . . . . . |  |


| Sample Input 4 | Sample Output 4 |
| :--- | :--- |
| . . . . | can fold |
| . . \# . |  |
| $\ldots$. . . |  |
| . \#\#\# . |  |
| . \# . . . |  |
| . . . . |  |

