

H P C O D E W A R S X V I I

In a portion of the arena field, a fence has been constructed to hold a large ox. The sign over the pen has a title reading:

problem **12**
Boustrophedon
7 points

```
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##### # # # # # # # # ##### # # #
# # # # # # # # # # # # # #
##### # # ### ### ##### ##### # #
```

You cautiously creep nearer, careful not to disturb the animal, and read the stone tablet near the pen:

The Phoenicians invented the alphabet and wrote right-to-left. The Greeks learned to write from the Phoenicians and at first they also wrote right-to-left. Over time the Greeks developed a writing style called Boustrophedon in which lines of text alternated right-to-left and left-to-right. Additionally, they wrote their letters in alternating directions as well, so that the letters "faced" the direction of the writing. There was no punctuation and no spaces between words. Boustrophedon means "ox-turning", and the style of writing is so named because it mimics a farmer plowing a field with an ox, back and forth in rows. Write a program to decode English text written in boustrophedon.

Input

The first line of input will indicate the number of rows of text to follow. After that, the input consists of a series of lines of English text written in boustrophedon. Each letter is represented by a five-by-five grid of spaces and hash "#" symbols. Each letter grid is separated from the next grid by a single space. A blank line is provided before each row. The program must determine if the direction of the first line is right-to-left or left-to-right. It could go either way. All following lines alternate in direction. There will be no more than twelve letters per row.

2

```
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```

A file named **letters5x5.txt** provides the left-to-right forms of the letters. Your program may read the file, or you may copy the data into your program. The file is a sequence of twenty-six five-by-five grids. Spaces are represented by periods and lines are represented by the English letter represented in the grid. Two examples are shown below.

```
RRRR.
R...R
RRRR.
R..R.
R...R
.SSS.
S....
.SSS.
....S
.SSS.
```

Output

The program must transcribe each row of input into English letters and print the letters as a single line of output. All output must be printed left-to-right (not boustrophedon).

THEFIRSTDAYWESAILEDEAST

H P C O D E W A R S X V I I