

## 10851 2D Hieroglyphs decoder

Steganography is one of the most famous techniques for hiding information in different places, including images. Recently, for example, Xerox announced they were releasing a 2D-hieroglyphs that were able to codify a message within them. Your task is to decipher a 2D-hieroglyph.

A 2D hieroglyph is a matrix  $H$  of 10 rows and  $M + 2$  columns that encode a message of length  $M$  characters  $(c_0, c_1, \dots, c_{M-1})$ . The matrix  $H$  has the following lattice:

$$H_{i,j} = \begin{cases} '/' & \forall i = 0, j \in (0, 1, \dots, M + 1) \\ '/' & \forall i = 9, j \in (0, 1, \dots, M + 1) \\ '/' & \forall j = 0, i \in (0, 1, \dots, 9) \\ '/' & \forall j = M + 1, i \in (0, 1, \dots, 9) \\ b(i - 1, c_{j-1}) & \forall i \in (1, 2, \dots, 8), j \in (1, 2, \dots, M) \end{cases}$$

where

$$b(i, c) = \begin{cases} '/' & \text{if } (\frac{c}{2^i}) \bmod 2 = 0 \\ '\backslash' & \text{if } (\frac{c}{2^i}) \bmod 2 = 1 \end{cases}$$

and  $c$  is the ASCII value of the character passed to the  $b$  function.

Your task is to find the message given the matrix  $H$ .

### Input

The input is composed of a first line with a number  $N$  indicating the number of messages to decode, followed by  $N$  matrices separated by a “newline” character. The length of any message will not be more than 80 characters.

### Output

The output must have  $N$  messages, one per each matrix given in the input.

### Sample Input

```
2
///////////////////////////////////////////////////
//\//\//\//\//\//\//\//\//\//\//\//\//\//\//
//\//\//\//\//\//\//\//\//\//\//\//\//\//\//
\//\//\//\//\//\//\//\//\//\//\//\//\//\//
\//\//\//\//\//\//\//\//\//\//\//\//\//\//
//\//\//\//\//\//\//\//\//\//\//\//\//\//
//\//\//\//\//\//\//\//\//\//\//\//\//\//
\//\//\//\//\//\//\//\//\//\//\//\//\//\//
//\//\//\//\//\//\//\//\//\//\//\//\//\//
////////////////////////////////////
////////////////////////////////////

//\//\//\//
\//\//\//\//
//\//\//\//
//\//\//\//
```

```
////////\\  
/////////  
\\\\\\\\\\\  
\\\\\\\\\\\  
/////////  
/////////
```

**Sample Output**

```
LA LLUVIA EN SEVILLA ES UNA MARAVILLA  
abcdefghi
```