| Problem 8 | | 72 Points |
|---|---|---|

# Dumb Waiter

**Program Name: waiter.java  Input File: waiter.in**

Working in a restaurant is never easy, but some waiters have worse luck than others. In an attempt to determine which waiter has the worst luck and will have the hardest time cleaning up broken dishes, write a program that can analyze a 'picture' of a set of broken dishes and determine the number of separate pieces.

### Input

The first line of input will contain a single integer *n* indicating the number of data sets (sets of broken dishes). Each data set will consist of two parts:

1. The first part is a line containing a single positive integer *m* (less than 10) indicating the number of lines that will be use to describe the 'picture' of the broken dishes.
2. The second part is a series of *m* lines, each of length strictly less than 10 characters, and quite possibly empty. These lines will be filled with a combination of blanks and pound characters ('#') which represents the picture of the broken dishes on the floor as seen from above. Each piece is defined as a set of connected pound characters, where two pound characters are connected only when they are vertically or horizontally adjacent (i.e., diagonal adjacency does not imply a connection).

### Output

For each data set, determine the number of distinct pieces pictured and output that integer on its own line. You can safely assume that there will be at least one piece in each picture.

### Example Input File

```
3
4
  ###
  # #
 #
###
9

  #  ###
 #   ##
  #
     #
  ###
  ###
  #

2
### #
   ##
```

### Example Output To Screen

```
2
6
2
```