Problem #6: Bust 'A Move

Program Name: bust.java Input File: bust.dat

The classic video game, Bust 'A Move, is based on the ability of the player to form groups of balloons that are the same color. When these groups are formed, all the balloons in the group suddenly burst, leaving a much smaller set of balloons standing between the player and the end of the level.

A computer program that plays this type of game needs to be able to distinguish groups of similar objects.

For this problem, write a program that can determine the number of distinct groups of balloons of the same color on a 5x10 game board.

There are four colors of balloons:

'R' - Red
'B' - Blue
'G' - Green
'Y' - Yellow
'.' (period) - no balloon

Input

The input will consist of multiple game boards. The first line of the input indicates the number of game boards to be processed. The rest of the file contains the game boards. Each board is five lines high and ten columns wide.

Output

Print one line of output for each game board: X groups. Where X is the number of distinct, contiguous groups of balloons on the game board.

Two balloons are considered to be in the same group if they are vertically or horizontally adjacent and are the same color.

Note that periods denote empty space and do not form groups.

Example Input File

```
3
..........
.RR.......
.RR.......
..........
..........
..........
.R.R.BBB..
.RRR..B...
.R.R.BBB..
..........
RRRRRRRRRR
BBBBBBBBBR
RRRRRRRRRR
RGGGGGGGGG
RRRRRRRRRR
```

Example Output To Screen

```
1 groups
2 groups
3 groups
```