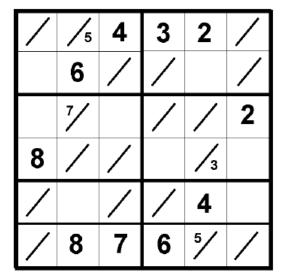
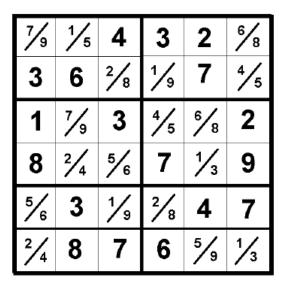


7788 Tight-Fit Sudoku

At some point or another, most computer science students have written a standard Sudoku solving program. A slight twist has been added to standard Sudoku to make it a bit more challenging.

Digits from 1 to 9 are entered in a 6×6 grid so that no number is repeated in any row, column or 3×2 outlined region as shown below. Some squares in the grid are split by a slash and need 2 digits entered in them. The smaller number always goes above the slash.





Incomplete Grid

Solution Grid

For this problem, you will write a program that takes as input an incomplete puzzle grid and outputs the puzzle solution grid.

Input

The first line of input contains a single decimal integer P, $(1 \le P \le 100)$, which is the number of data sets that follow. Each data set should be processed identically and independently.

Each data set consists of 7 lines of input. The first line of the data set contains the data set number, K. The remaining 6 lines represent an incomplete Tight-Fit Sudoku grid, each line has 6 data elements, separated by spaces. A data element can be a digit (1...9), a dash (`-') for a blank square or two of these separated by a slash (')'.

Output

For each data set there are 7 lines of output. The first output line consists of the data set number, K. The following 6 lines of output show the solution grid for the corresponding input data set. Each line will have 6 data elements, separated by spaces. A data element can be a digit (1..9), or 2 digits separated by a slash (').

Sample Input

Sample Output

1
7/9 1/5 4 3 2 6/8
3 6 2/8 1/9 7 4/5
1 7/9 3 4/5 6/8 2
8 2/4 5/6 7 1/3 9
5/6 3 1/9 2/8 4 7
2/4 8 7 6 5/9 1/3