**Sudoku Solver**

**Program Name: SudokuSolver.java Input File: SudokuGrids.dat**

Josh loves Sudoku, and has just gotten through solving an entire book of simple Sudoku puzzles, sadly he has no idea if his answers are correct as he removed the answers from the back of the book, so as to avoid accidentally seeing them. So Josh decided he would write a code that would solve the Sudoku grids so that he could check his answers. For those who don’t know, a Sudoku grid is a 9x9 grid that consists of 9 smaller 3x3 “blocks”. Each “block” contains numbers from 1 to 9 in such a way that no number appears more than once in the same block, row, or column. In other words, any given number will appear **no more than nine times.** A blank space is marked with a 0. And whenever you find the correct number, make sure you add it to the grid, you may need it to solve other locations on the grid. You only need to solve for the locations given to you, not the whole grid.

**Input**

The first line of input will contain a single integer n that indicates the number of grids there will be. For each grid:

* The first line will contain a single integer x signifying the number of locations you will need to solve.
* The next few lines will be the Sudoku Grid
* The next x lines will contain two integers, r c, where 1 ≤ r ≤ 9 and 1 ≤ c ≤ 9 that signifies a location on the Sudoku grid.

**Output**

For each location, you will output the integer that belongs at that location.

**Example Input File**

1

3

053020407

240571860

860904210

410369700

608000531

730815049

576090120

300786904

980052370

5 2

7 8

3 5

**Example Output to Screen**

9

2

3