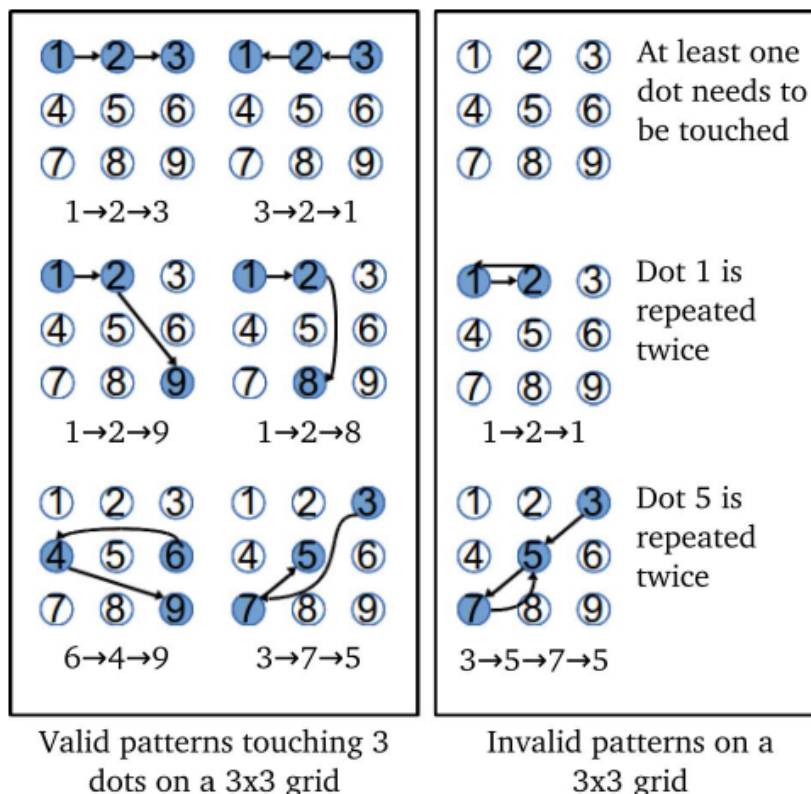


6653 Pattern Locker

Mr. Anderson is in a relationship with a very suspicious and jealous girlfriend. She is always checking Anderson's phone logs and texts to find out he is up to. Feeling that his private space is getting violated, he decided to put a pattern locker on his phone.

This pattern locker comes with a 9 dots arranged on a 3x3 square grid by default. One has to drag through several dots to record a pattern. Then to unlock the phone, one needs to replicate the same pattern recorded before. If we assume that each dot is assigned a unique number then a pattern is nothing more than a sequence of digits. The pattern locker requires that no digit appears in the sequence more than once.

Here is an example of such a pattern locker and some valid and invalid recorded pattern:



Even after recording a hard to crack pattern, Mr. Anderson doesn't feel quite comfortable. He is worried that his girlfriend might try all possible sequences to break his pattern. He wants to know how many different pattern sequences are possible for a given grid size, minimum and maximum numbers of dots recorded in patterns.

You have to help Mr. Anderson in counting the number of possible such sequences.

Input

The first line of the input will give the number of test cases, T ($1 \leq T \leq 10000$). Then T test cases follow in separate lines. Each test case consists of three numbers L, M, N separated by a single space in between two numbers. The first number L ($1 < L \leq 100$) denotes the number of rows and columns

in the grid. The second number M ($1 \leq M \leq L * L$) denotes minimum number of dots to be included in a pattern and the third number N ($M \leq N \leq L * L$) denotes the maximum number of dots to be included in the pattern.

Output

For each test case, you need to print the test case number X in the format ‘Case X : ’. This will be followed by the count of possible sequences for the given grid size, minimum and maximum number of dots in a sequence. Since the count can be pretty big, you need to print the value of the count modulo 10000000000007 (1 followed by 12 zeros followed by 7). There is no new-line between cases.

Sample Input

```
2
3 4 9
3 1 9
```

Sample Output

```
Case 1: 985824
Case 2: 986409
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