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# Edge, Path, Number

Input file:            **standard input**  
Output file:           **standard output**  
Time limit:            1 second  
Memory limit:         256 megabytes

Fish has a directed graph and there is a label attached to each edge. A label is an integer ranging from  $[0, 9]$ . If he chooses a vertex as start point, moves along  $K$  edges in the graph, and writes down the labels in the edges walking through as  $l_1, l_2, \dots, l_K$ , he can easily concatenate them to get a decimal integer  $l = \overline{l_1 l_2 \dots l_K}$ .

Now he wonders, given  $P$  and  $X$ , how many ways he can move so as to get a number  $l$  satisfying  $l \equiv X \pmod{P}$ . Two ways are considered different if the order of edges walking through is different.

## Input

The first line of input contains an integer  $T$ , representing the number of test cases.

Then for each test case:

The first line contains five integers  $N, M, K, P, X$  as mentioned above, separated by one space .

Then  $M$  lines follow, each line containing three integers  $u, v, w$  which means that there exists an edge from node  $u$  to node  $v$  with label  $w$ .

## Output

For each test case, you should output **Case  $x$ :  $y$** , where  $x$  indicates the case number starting from 1 and  $y$  is the number of ways.

Since  $y$  can be very large, you should output  $y \bmod (10^9 + 7)$  instead.

## Example

standard input	standard output
3	Case 1: 4
4 4 3 3 0	Case 2: 3
1 2 1	Case 3: 4
2 3 1	
3 4 1	
4 1 1	
4 4 3 2 1	
1 2 1	
2 3 1	
3 4 2	
4 1 1	
4 4 4 1111 0	
1 2 1	
2 3 1	
3 4 1	
4 1 1	

## Note

$$1 \leq T \leq 100$$

$$1 \leq N \leq 100$$

$$1 \leq M \leq 1000$$

$$1 \leq K \leq 8$$

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$$1 \leq P < 10^K$$

$$0 \leq X < P$$

For 90% test cases:  $N \leq 20$ ,  $M \leq 100$ ,  $K \leq 6$