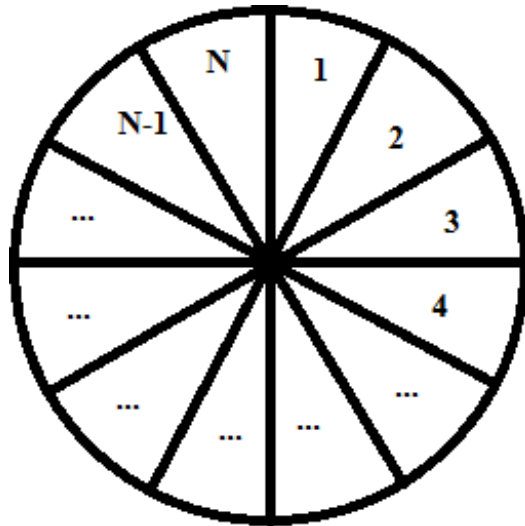


# Colorful Circle (EASY)

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I take this problem from my midterm exam today, because for me and some of my friends it's interesting, so I decided to translated this problem into English and upload this problem to SPOJ. See the original problem in Indonesian language [here](#).  
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Given  $N$  sectors where  $1 < N < 10^{1000}$ , from a circle that shown in the picture below:



We will color each sector with  $K$  different colors, where  $2 < K < 10^{1000}$  such that each sector colored with one color and each adjacent sector must have different color. Your task is to count how many ways to color all that sectors.

## Input

First line, there is a number  $T$  ( $0 < T < 1000$ ) denoting number of test cases, then  $T$  lines follow. each line containing two integers:  $N$  and  $K$  separated by a space.

## Output

For each test case, output number of ways to color the circle, since the number can be too large, take modulo  $10^9+7$ .

## Example

Input:

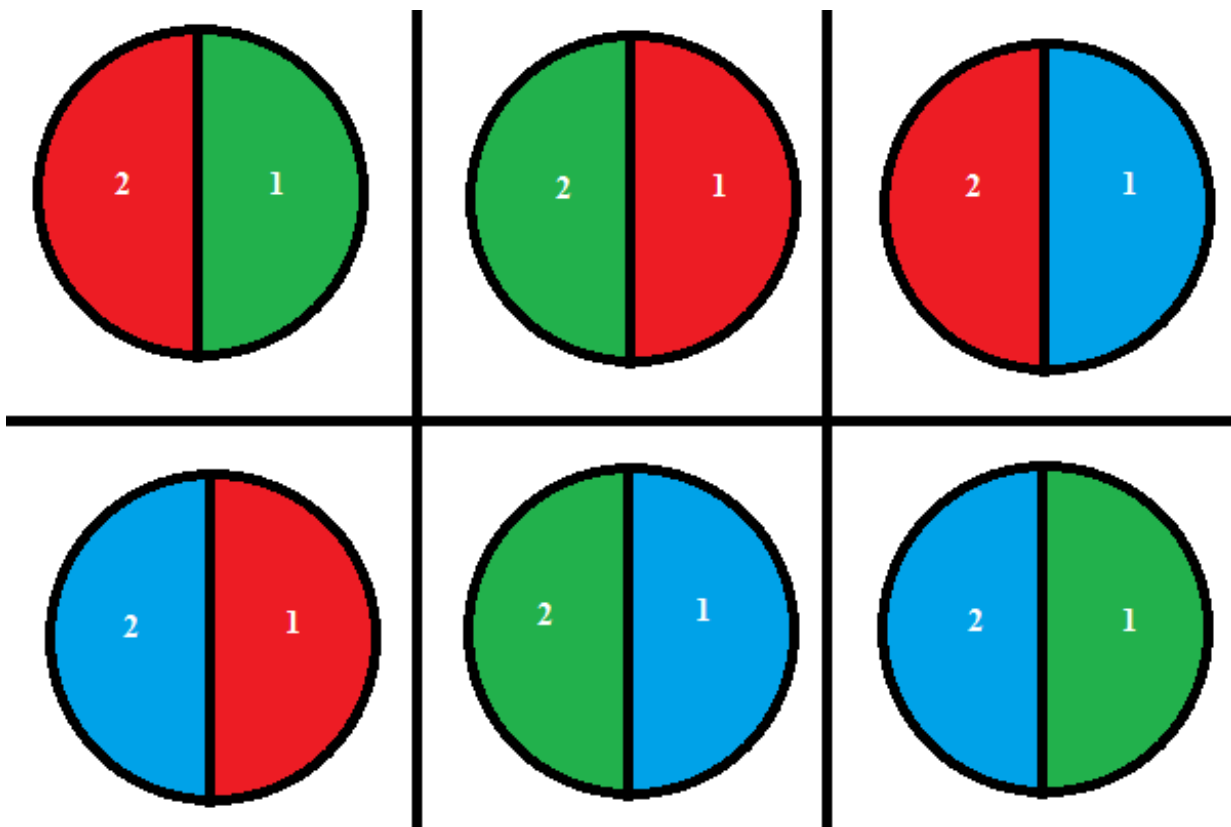
```
2
2 3
3 3
```

Output:

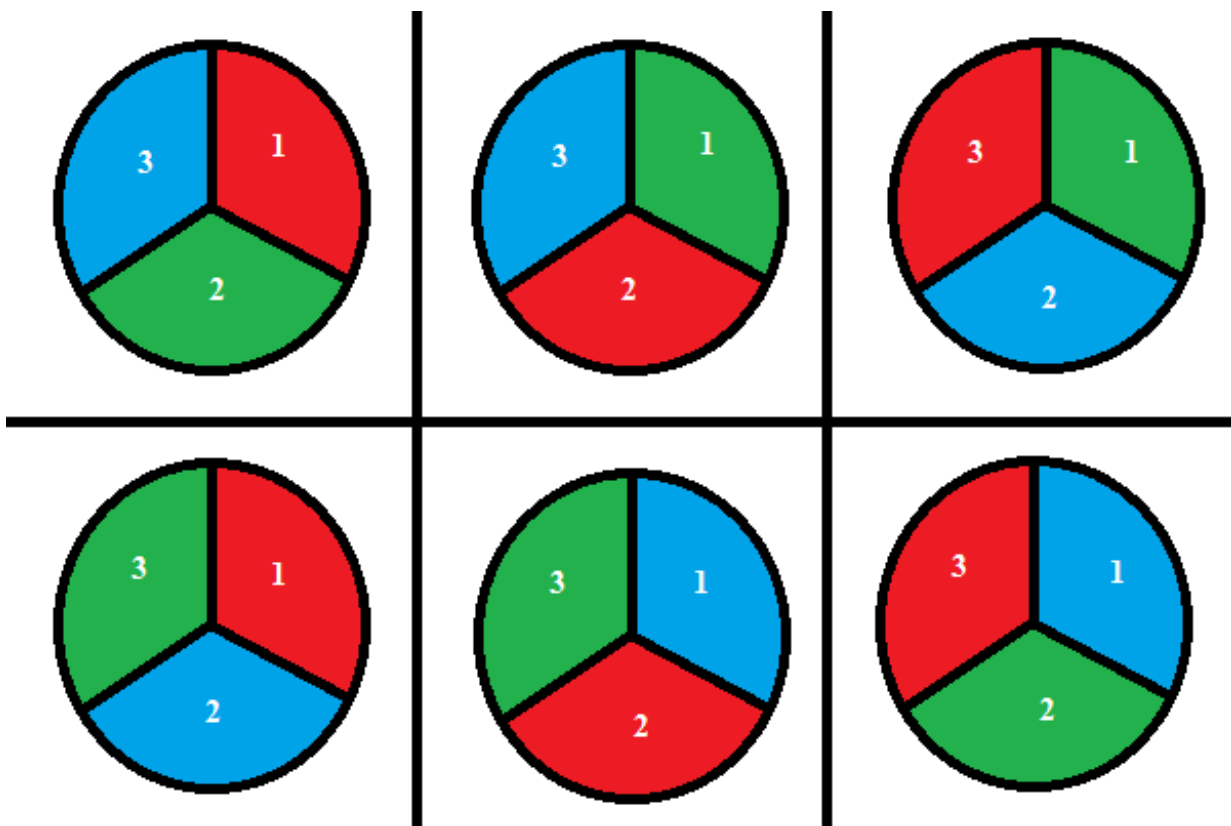
```
6
6
```

## Explanation:

For the first case, we have two sectors and three colors, here is all possibilities:



For second test case, we have three sector and three colors, here is all possibilities:



Time limit set so that ~128 Bytes of python 3 code can get accepted, also my C top speed program AC in 0.12s  
Have fun :)

**See also:** [Another problem added by Tjandra Satria Gunawan](#)