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## Roses and pots (2)

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Desè Concurs de Programació de la UPC - Final (2012-09-15)

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You have roses of  $c$  different colors. In particular, you have  $n$  roses of each color. Please compute the number of ways to plant all the roses in a line of  $cn$  pots, one rose per pot, in such a way that there is exactly one pair of adjacent roses of the same color. The roses of the same color are indistinguishable.

### Input

Input consists of several cases, each with  $c$  and  $n$ . Assume that  $c$  is either 2 or 3. For  $c = 2$ , we have  $1 \leq n \leq 10^7$ . For  $c = 3$ , we have  $1 \leq n \leq 200$ .

### Output

For every case, print the answer modulo  $10^8 + 7$ .

### Sample input

```
2 2
3 1
3 2
3 200
```

### Sample output

```
2
0
36
73999084
```

### Problem information

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