

Problem

Result



## Modulo product

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Ninja got an easy assignment from his professor but he is unable to solve this. So he needs your help to complete the assignment.

In the assignment, he is given two integers A and B and he needs to output the product of all numbers from 1 to A modulo B, where 1 and A are inclusive.

For example, if A=5 and B=7, the answer will be  $(1 * 2 * 3 * 4 * 5) \% 7 = 1$  so the final answer is 1.

### Input format:

The first line of input will contain an integer T, that denote the number of test cases.

Every test case will consist of one single line and that line will contain two integers: A and B.

### Constraints:

$1 \leq T \leq 50$   
 $1 \leq A \leq 10^9$   
 $1 \leq B \leq 10^5$   
Time Limit: 1 second

### Output format:

For every test case, print the output in a newline.

### Sample Input 1

```
4
8 10
5 140
18 19
20 21
```

```
1 #include<bits/stdc++.h>
2 using namespace std;
3 #define ll long long
4 int main(){
5     // write your code
6     int t;
7     cin>>t;
8     while(t--){
9
10         ll a,b;
11         cin>>a>>b;
12         if(a<b)
13         {
14             ll k=1,i;
15             for(i=1;i<=a;i++)
16             {
17                 k=(k*i)%b;
18             }
19             cout<<k<<"\n";
20         }
21         else
22             cout<<0<<"\n";
23     }
24     return 0;
25 }
```